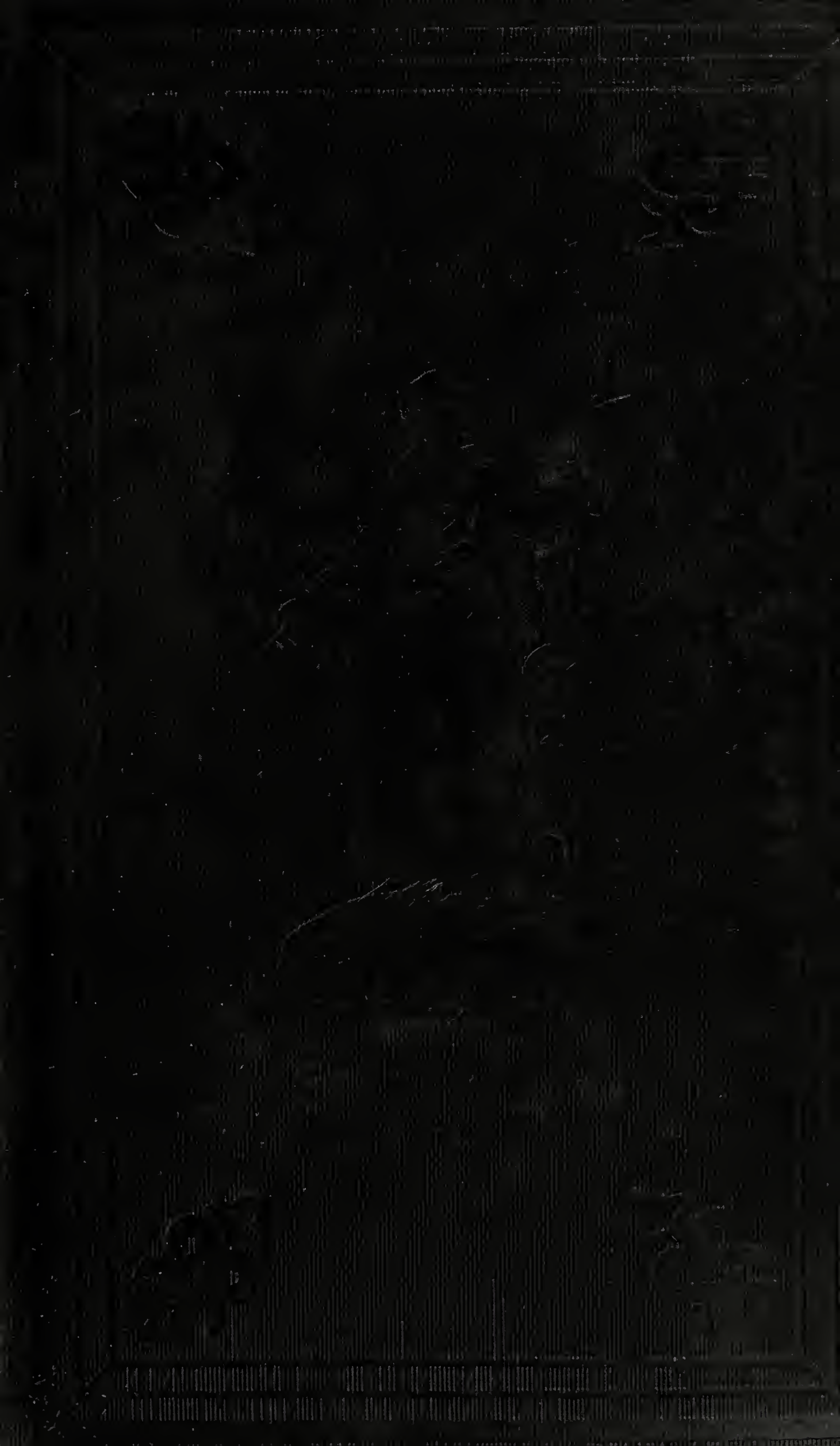

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OF THE

HALF-YEARLY ABSTRACT

OF THE

Medical Sciences.

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HALF-YEARLY ABSTRACT

OF THE

MEDICAL SCIENCES.

JULY—DECEMBER.

1848.

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43134

THE

HALF-YEARLY ABSTRACT

OF THE

MEDICAL SCIENCES:

BEING

A PRACTICAL AND ANALYTICAL DIGEST OF THE CONTENTS OF THE PRINCIPAL BRITISH AND CONTINENTAL MEDICAL WORKS PUBLISHED IN THE PRECEDING SIX MONTHS.

TOGETHER WITH

A SERIES OF CRITICAL REPORTS ON THE PROGRESS OF MEDICINE AND THE COLLATERAL SCIENCES DURING THE SAME PERIOD.

EDITED BY

W. H. RANKING, M.D. Cantab.

LATE PHYSICIAN TO THE SUFFOLK GENERAL HOSPITAL.

Apparatu nobis opus est, et rebus exquisitis undique et collectis, arcessitis, comportatis.
Cicero.

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PREFACE.

The addition of a General Index to the present Volume marks a point in our career, which offers a justifiable pretext for the review of our past exertions.

When, four years since, we ventured to seek for the "Half-Yearly Abstract of the Medical Sciences" a share of the approbation of the profession, it was not without many misgivings as to our own capabilities for the undertaking, as well as to the existence of a field for a new medical journal.

The fact that the first Volume commanded a large circulation, which has been subsequently increased, and has been maintained, in spite of the many circumstances which have recently depressed literary exertions, has convinced us that, on the latter point, our fears were groundless; and, as regards the former, we are proud to be able to state, that in addition to the evidence afforded by a large circulation, the receipt of numerous and entirely spontaneous testimonies of approbation from the most distinguished members of our profession in this and other countries, has satisfied us that our humble efforts for the diffusion of valuable information in a form acceptable to all practitioners have been kindly appreciated. It would be ungracious here not to acknowledge the valuable assistance afforded by our talented collaborateurs, Drs. Guy, Day, Kirkes, and Mr. Ancell, to whose admirable Reports we consider that we are much indebted for the estimation in which this work is held.

To turn from these to less agreeable reflections, we feel called upon to notice certain ill-natured remarks and insinuations on the part of a few of our contemporaries. We do not think it necessary to defend the method upon which this work is conducted; it is sufficient to say, that we received the commendations of some of these parties,

until it was found that our circulation interfered with their own, when they suddenly found something to condemn. That so many journals are now adopting the practice of giving "Abstracts" and "Reports," we take to be at least a tacit approval of our plan.

We have also to remark upon certain rather angry letters from parties complaining that we have passed over their contributions to other journals without notice, thereby implying favoritism. This charge we utterly disclaim: but we beg once for all to state, that it has all along been our object, as it will be in future, to exercise the most irresponsible independence in our selections. We do not, however, in omitting to notice any particular essay, wish in the least degree to imply a want of merit therein.

In consequence of the labour and space required for the General Index, the Reports on Anatomy and Physiology, &c. are unavoidably postponed to the next volume.

In conclusion, we beg cordially to thank the profession for the support which has placed this journal in the honorable position which it now enjoys.

W. H. R.

Norwich, *December*, 1848.

NOTICE TO CORRESPONDENTS.

The Editor requests that all communications be forwarded (free) either to Mr. CHURCHILL, *Princes street, Soho, London, or to himself, addressed* Dr. RANKING, *Norwich.*

The Editor is compelled to remind his American correspondents that no parcels are taken in, unless the entire charge be paid upon them.

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British and Foreign Medico-Chirurgical Review.
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Edinburgh Medical and Surgical Journal.
London and Edinburgh Monthly Journal.
Dublin Quarterly Journal of the Medical Sciences.
Lancet.
Medical Gazette.
Provincial Medical Journal.
Medical Times.
Dublin Medical Press.
Bell's Pharmaceutical Journal.
Guy's Hospital Reports.
Chemical Gazette.
British Record of Obstetrical Medicine and Surgery.

AMERICAN.

American Journal of the Medical Sciences.
Philadelphia Medical Examiner.
New York Journal of Medicine.
Boston Medical and Surgical Journal.
Southern Medical and Surgical Journal.
British American Journ. of Med. Science.

FRENCH.

Annales de Chirurgie.
,, *d'Hygiène.*
,, *de Chimie et de Pharmacie.*
,, *des Maladies de la Peau.*
,, *Thérapeutique.*
Archives Générales de Médecine.
Bulletin des Académies.
Encyclographie Médicale.
,, *des Sciences Médicales.*
Journal des Connaissances Médico-Chirurg.
Gazette des Hôpitaux.
,, *Médicale.*
Journal de Chirurgie de M. Malgaigne.
Revue Médicale.
Journal de Chimie Médicale.
Journal de Chimie et de Pharmacie.

GERMAN.

Schmidt's Jahrbücher.
Zeitschrift für de Gesammte Medicin.
Muller's Archiv für Anatomie, &c.
Liebig's Annalen der Chemie und Pharmacie.
Canstatt's Jahresbericht.
Buchner's Repertorium.
Haller's Archives für Physiolog. und Patholog. Chemie.
Casper's Wochenschrift.
Poggendorf's Annalen.

N.B. Every periodical here specified is consulted *directly* by the Editor and his Coadjutors.

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ABSTRACT OF THE MEDICAL SCIENCES,

&c. &c.

PART I.

PRACTICAL MEDICINE, PATHOLOGY, & THERAPEUTICS.

SECT. I.—ZYMOTIC DISEASES.

ART. 1.—*Treatment of Typhus Fever.* By Dr. GEORGE WOOD, Professor in the University of Pennsylvania, &c.

(*From a Treatise on the Practice of Medicine*, 2 vols., 1847.)

IN the earliest stage, before reaction has commenced, little treatment is usually necessary; and, indeed, there is seldom an opportunity for prescribing, as the patient is not seen until after the stage has passed. Sometimes, however, when it is more than ordinarily protracted or severe, it becomes necessary to employ remedies; and during the prevalence of epidemics of typhus, cases now and then occur in which life may depend on the timely interference of the physician. An emetic has been recommended under these circumstances, in order to rouse the system out of its apparent torpor, and to direct action to the surface. It may sometimes be useful when the depression is not great. Ipecacuanha or sulphate of zinc should be preferred. But the general indication is to stimulate by such means as will not be likely to increase the fever too greatly, when it takes place, nor too strongly to add to the already existing tendency to the brain. The morbid cause is depressing the vital functions by its sedative power, and there is danger that they may be reduced below the point of reaction. External stimulants are the safest. The most powerful rubefacients, such as mustard, solution of ammonia, cayenne pepper, and oil of turpentine, should be applied to the extremities and along the spine; and these should be aided by external heat, by means of hot bricks, bottles of hot water, &c., placed along the body, hot stimulating pediluvia; or what would be probably the most effectual, the hot bath. If internal stimulation should become necessary, carbonate of ammonia, or oil of turpentine, would be preferable to the

alcoholic remedies, as less likely to affect the brain; but when the prostration is excessive, recourse may be had to wine, brandy, or even ether. Cases, however, requiring this treatment, are exceedingly rare.

After the fever has become established, it may be necessary to unload the stomach by a mild emetic; but in general this may be dispensed with, and the treatment commenced with an efficient cathartic, so as thoroughly to evacuate the bowels. Calomel and rhubarb are generally best adapted to the circumstances of the case; though when the febrile action is high, with considerable strength of pulse, the saline purgatives may be preferred, with or without the addition of senna. Throughout the whole course of the disease, the bowels should be kept open by cathartics. These are indicated by the necessity which exists of avoiding accumulations of excreted matter in the bowels, and the depressing effect arising from its absorption when retained. The dark, offensive substances which collect in the alimentary canal in typhus probably act as a direct sedative to the system. Cathartics, therefore, so far from increasing the debility, tend, if properly selected and employed, to obviate it. I am sure that I have seen the system, in low states of typhus, rise under the operation of medicines of this kind. No such contra-indication exists here as in the enteric or typhoid fever. The only caution necessary is to graduate the activity of the medicine, its dose, and frequency of repetition, to the state of the system. In the early period of excitement, the object may be effected by small doses of some saline purgative; but later in the disease, rhubarb should be preferred, either alone, or combined with aloes. One of the tinctures of rhubarb may be employed, with great propriety, in the latest stage, when stimulation becomes necessary. Sometimes it may be necessary to aid the cathartic by enemata, which may in general advantageously contain the oil of turpentine.

The question as to the propriety of bleeding, in the early stage of the fever, has been much discussed. By some the remedy has been urged as of the greatest importance; by others it has been condemned as almost always injurious, and scarcely ever necessary. Probably the advocacy of it may partly have been owing to the confounding this disease with enteric fever, which is well known generally to bear bleeding well at the commencement. It is very certain that, in genuine typhus, it is often capable of doing much harm; and death has frequently been the result of its injudicious use. During the prevalence of the great typhus epidemics of this country (America), it frequently happened that, upon the first arrival of the disease in a neighbourhood, not being understood by the physicians, and frequently presenting the complication of some local inflammation, it was treated by them as they had been in the habit of treating other febrile and inflammatory diseases, with the free use of the lancet. The consequences were, in many instances, very fatal. Such an instance occurred in the neighbourhood of Philadelphia. The disease approached the city through the state of New Jersey, and prevailed for some time in the opposite village of Camden, before it crossed the Delaware. In that place it was unknown, and was treated as an inflammatory affection, with almost uniformly fatal results. My

friend and preceptor, the late Dr. J. Parish, of Philadelphia, then a young practitioner, was called into the village at this juncture, and having been prepared by the perusal of Dr. North's treatise on the disease, as it had prevailed in New England, immediately adopted a different course of treatment, avoiding bleeding altogether, and using stimulants, with the effect of curing almost all cases. He thus laid the foundation of that reputation as a skilful physician, which has never been exceeded in our city. I have heard of other reputations which began in the same way. So fatal was copious bleeding in that epidemic, that popular, and to a great extent professional, opinion received a set against it; and it was some time after the disappearance of all tendency to the disease before the fear of the remedy so far subsided as to permit its judicious use under circumstances requiring it.

But, though thus injurious if abused, there are undoubtedly cases of typhus fever in which bleeding may be moderately employed with safety and advantage. It is highly probable that different epidemics may differ greatly in this respect, the loss of blood being much better borne in one than in another. The remedy is often very speedy and effectual in the relief of the headaches, and other symptoms of cerebral disturbance, during the first few days. Its effects are said to be even more striking in this than in other febrile diseases. It may be resorted to when there is evidence of much and dangerous local determination of blood, with considerable strength of pulse; but even then the quantity taken should be small. Little is required to diminish the force of the pulse, and there is danger of syncope, as well as of subsequent prostration, from the loss of large quantities. Six or eight ounces are often sufficient, and more than twelve should seldom be extracted at one operation. In the great majority of cases it is altogether unnecessary. In those which are at all doubtful, it is best to employ local bleeding. This is safer, and relatively more effectual. When the head is affected, the blood should be taken from the temples or back of the neck, by cups or leeches. In pectoral inflammation, they may be applied between the shoulders. A very slight depletion may sometimes be usefully effected by means of dry cups, which withdraw a certain amount of blood from the circulation to the surface where they are applied.

The febrile heat of the early stage is most effectually relieved by the external use of cold water. This may be dashed upon the patient, as recommended by Dr. Currie, or applied by sponging. The latter mode is preferable where there is much debility. The remedy should never be used when there is any feeling of chilliness on the part of the patient, or any perspiration. Affusion would probably also be hazardous in cases complicated with pneumonia. In doubtful cases, sponging with cold water should be preferred. Sometimes spirit, or spirit diluted with water, may be advantageously substituted. The effect of these remedies is to relieve the distressing heat, relax the skin, produce occasionally a gentle sweat, and greatly comfort the patient. The affusion is said sometimes to have apparently arrested the disease.

The mild refrigerating diaphoretics may also be used, such as the

neutral mixture, effervescing draught, solution of acetate of ammonia, and sweet spirit of nitre. Dover's powder is often very useful by producing diaphoresis, quieting restlessness, and promoting sleep. It should, of course, not be employed in comatose cases. When the fever is complicated with pectoral inflammation, no remedy is probably so effectual as a combination of opium, ipecacuanha, and calomel, given so as to keep the system moderately under an anodyne influence, and continued until it slightly affects the gums. Sometimes gently-stimulant infusions may be administered at the same time. In this country (America) the infusion of serpentaria has been frequently used. On the continent of Europe, they often employ the flowers of arnica, and sometimes contrayerva and angelica.

Stimulants are essential in the treatment of typhus. Sometimes it is necessary to administer them from the outset of the disease; but more frequently they are required only at an advanced period, when the feebleness of the pulse, the dryness of the tongue, the sordes about the teeth, and often some coolness of the extremities, indicate the commencement of prostration. Upon the whole, the most efficient stimulants are Peruvian bark, wine, and opium. The bark was formerly given in decoction, often made with wine, with the addition of serpentaria or aromatics. At present sulphate of quinine is generally preferred, as more convenient of administration, and more acceptable to the stomach. The dose may be a grain every two hours. Wine is usually given at first in the form of whey, made with two parts milk and one of Madeira, sherry, or Teneriffe. Afterwards, when stronger stimulation is required, it may be administered pure. The quantity must of course be regulated by the degree of debility, and the effects produced. It may not exceed a wine-glassful in a day, or it may amount to a quart. Porter or ale may be substituted when more convenient, or preferred by the patient. Opium is administered, in substance or tincture, in such quantities, and at such intervals, as to maintain a regular excitement without stupefaction. From half a grain to a grain may be given every four, six, or eight hours; and the quantity may be increased if necessary. Carbonate of ammonia is also a good stimulant, which may often be used advantageously, dissolved in water, with the addition of gum arabic and loaf sugar, to obtund its acrimony. From two and a half grains to ten grains may be given at a dose every hour or two. It is customary to begin with small quantities of wine-whey and carbonate of ammonia, alternately, every second hour, increasing the dose, and adding the other stimulants as the case is found to require them. Sometimes it is necessary to have recourse to brandy, or other form of proof spirit. The oil of turpentine may also be used; and some have recommended phosphorus, but I have never used it.

Should the stimulants be found to increase the frequency of the pulse, heat of skin, delirium, and stupor, they should be suspended, or the quantity reduced. If they strengthen without accelerating the pulse, relax the skin, and moderate delirium and stupor, they may be considered as doing good.

In the sudden-sinking spells which sometimes occur, and threaten the most serious consequences, active stimulants must be quickly used.

Under these circumstances, sulphuric ether may be given in the dose of a fluid drachm. Long-continued sleep occasionally exhausts patients in typhus fever exceedingly. It is best, therefore, unless sleep may, from special causes, be deemed very desirable, to wake the patient occasionally, in order to administer his medicines. This, too, is necessary, in order to sustain a uniform effect by means of the medicines.

For the nervous symptoms, such as restlessness, jactitation, vague uneasiness, subsultus, &c., camphor is often an admirable remedy, in doses of from five to ten grains, given in emulsion. Musk is the most effectual remedy in singultus.

External stimulation is of great importance in those cases in which the surface is cool. This is effected by means of sinapisms to the extremities; blisters to the thighs and trunk, allowed to remain so long as is necessary to redden without vesicating; and by frictions with cayenne pepper and hot brandy, oil of turpentine, liniment of turpentine, &c. In the lowest and most insensible conditions, the electro-magnetic machine may be used; or the patient may be wrapped from head to foot in a blanket saturated with heated spirit; or, finally, the effect of a burning coal applied to the epigastrium may be tried.

For violent headache, coma, and delirium, after the local abstraction of a little blood, if this be deemed necessary, it will be proper to thin or shave off the hair, to apply ice or cold water, and in the latter stages to blister the back of the neck, or what is more preferable, the whole scalp. Sometimes great relief is afforded by warm fomentations about the head when the cold applications fail.

For the measures requisite in cases complicated with inflammation of the lungs, the reader is referred to typhous pneumonia. Irritation of stomach and bowels is to be combated by the ordinary measures, among which opiates internally, and revulsive applications, or cataplasms externally, are not the least efficient.

The remarks made in reference to diet, under enteric fever, are applicable also here. It is even more necessary in typhus to throw a due amount of nutrition into the system; and though for the first few days it may be proper to confine the patient to farinaceous liquids, yet, as the disease advances, animal broths become necessary; and in very feeble states we must have recourse to the animal essences, milk-punch, &c.

ART. 2.—*On the Internal Use of Turpentine in Typhoid Fever.* By Dr. GEORGE WOOD, Professor in the University of Pennsylvania.

(*From a Treatise on the Practice of Medicine,* 2 vols., 1847.)

The author remarks that there is a particular and dangerous condition in typhoid fever, in which he has rarely known turpentine to fail. In his description of the symptoms of the disease he states that in the latter periods the tongue, instead of cleaning from the edges and tip gradually, as in ordinary convalescence, often parts with its fur quickly, and in large flakes generally, first from the middle and

back parts of the surface, which is left smooth and glossy, as if deprived of its papillæ. He also mentions that if, after this process, the tongue remain moist, a slow convalescence may be confidently calculated upon. "But it not unfrequently happens," he proceeds to observe, "that during the progress of the cleaning process, or after its completion, the surface of the tongue becomes quite dry, and the process, if not finished, is suspended. At the same time, there is generally an increase of the tympanites, and an aggravation of the other symptoms. Two cases of this kind I have seen terminate fatally. Ascribing the aggravation of the case, under these circumstances, to the occurrence of ulceration in the ileum, I inferred that the oil of turpentine, which had been recommended in ulcerations of the intestines, might prove useful here, and determined to employ it in similar cases. I did so, and have never yet found it to fail under the circumstances mentioned, although I have frequently had occasion to resort to it, both in public and private practice. It acts in some measure as a stimulant, but chiefly, I believe, as an alterative to the ulcerated surfaces in the intestinal mucous membrane. It should be given in doses of from five to twenty drops, every hour or two, in an emulsion of gum arabic, sugar and water; a little laudanum may be added. In the course of twenty-four, or at most forty-eight hours, some amelioration is observed. The tongue becomes gradually moister, and covered with a white fur, the tympanitic distension ceases to augment, and after a time diminishes; the pulse becomes less frequent, and the patient enters slowly into convalescence, without any other remedy. Not unfrequently the practitioner is not called in till the disease has assumed the aspect alluded to. He finds the tongue red, smooth, and dry, the abdomen tympanitic. I have known such cases to run on for a considerable time, without change, under various treatment, and then yield immediately to this remedy. I repeat, the oil of turpentine may be used with good hope of benefit in any case of enteric fever, in the advanced stage, with dry tongue and weak pulse; but in the cases alluded to, with a confidence of success, so far as the experience of twenty years may be admitted as evidence.

ART. 3.—*Treatment of Cholera.* Remarks by various Writers.

1st. *On the Treatment of Cholera by Strychnine.* By C. E. JENKINS, Esq.—The formula employed is, pure strychnia, gr. 1, conserve of roses sufficient to form eighteen pills, one to be given every quarter of an hour, and washed down with copious draughts of cold water, which the patient will greedily and gratefully imbibe. The first three or four pills will be probably ejected, but the subsequent doses will be retained, and their good effect, in conjunction with the water, speedily perceived.

The author, with regard to the *modus operandi* of these remedies, apprehends that strychine, being the most powerful tonic known, acts in that capacity on the prostrate nervous system; and that the cold water in the first place replaces the loss of the fluids, and in the next, by its coldness, constringes the papillæ of the mucous membrane, thus suppressing their outpourings; lastly, that, by its volume, distends and gives tone to the otherwise empty and flaccid intestinal tube.

The author supports the opinion that cholera and influenza are mere varieties of one and the same disease, attacking different organs; in the one, the mucous membrane of the respiratory, in the other, of the digestive, organs. In both forms the same copious watery discharge is emitted, accompanied by the same remarkable prostration of strength: both are subdued by the same means.

Lancet, Sept. 2d.

2. *On the Prevention of Cholera, and its Treatment by Common Salt.* —[A correspondent of the 'Lancet' offers the following observations:]

The following statement, bearing upon the prevention of susceptibility to cholera, should it appear in Great Britain, is considered worthy of public attention by a medical man of moderate practice and experience, who saw much of the malignant form of the disease in the early part of 1832 and middle of 1834:—

The causes which especially predispose to attacks of cholera, are a somewhat weakened state of the stomach and alimentary canal. This condition is so decidedly obviated by eating freely of common salt with our meals, that it is believed three fourths, at least, of the cases which would otherwise occur, may be prevented by having recourse to this simple addition to our food.

The quantity taken should be exactly what the stomach will bear without after-inconvenience; for an adult, from a quarter to a third of an ounce during the day is amply sufficient—children to have proportionably less; but this quantity must be subdivided, so that it may be taken at *three* periods; for example, a ninth of an ounce at breakfast, dinner, and tea or supper. It may be eaten with fish, animal food, poultry, game, bread, toast, or bread and butter.

The writer begs to state, that salted meats and other preparations into which salt enters or is dissolved, as broths, soups, &c., are totally different in their action upon the stomach to salt in its pure state. The chemical change produced on salt by heat, and its long admixture with other matter, not only destroys its preventive character, but renders solids or fluids thus impregnated, in many instances, prejudicial.

When cholera was prevalent in London, the writer was constantly exposed to its influence, and only used the above simple preventive measure. He could chemically and physiologically explain its mode of preventive action, but such detail is more calculated for medical journals and scientific bodies. Suffice it to add, that it may be taken without the slightest risk to the general health, under all circumstances.

Sanitary measures, as warm clothing, wearing flannel next the skin, ventilation, cleanliness, and good food, generous living rather than the reverse, are much recommended.

The writer will further observe, that the public are in error, who suppose fresh fish, perfectly in season, ripe fruits, or fresh vegetables unwholesome. Indeed, taken moderately, they lessen the tendency to the disease in question.

In two days after eating the quantity of salt, as recommended, persons, it is believed, will not be susceptible to the influence of cholera.

Its daily use, however, and in the same quantity and manner, must be persisted in, so long as cholera remains in this country, should it unhappily visit us.

The writer confidently believes this simple plan would operate as efficiently upon our regiments in India or elsewhere, where cholera prevails, as he feels assured it will be found to do in England, should its administration be unfortunately called for.

[The author of the above prophylactic suggestion (Mr. Beaman, of King street, Covent garden), during the advent of Asiatic cholera, in 1834, forwarded us a communication on its treatment, which was published in the Number for August 23d of that year (p. 754), and from which we extract the following statement:]

To an adult I give three tablespoonfuls of common table salt in half a pint of tepid or cold water; this produces vomiting in less than one minute, and the vomiting ought to be powerfully violent; such effect is followed by an immediate diminution of the cramps, and very marked increase in the fulness of the pulse; the other symptoms are much amended, the voice becoming stronger, and the muscular power greater. It may happen that the first dose answers every purpose; frequently, however, the beneficial effect of the first dose is not permanent, for within twenty minutes, or half an hour, the pulse begins to flag, and then rapidly decreases in power; another attack of cramp ensues, and the prostration increases; a second dose of the salt is now to be administered, and even a third may be required. I have never had occasion to give it oftener than three times.

The good effect of the salt emetic really depends upon its producing powerful and very efficient vomiting; without this full operation it ought to be thrice repeated, with an interval not exceeding five minutes between the doses.

The adjuvant treatment consists in placing the patient between warm blankets, but he must not be too heavily covered—rubbing the parts spasmodically affected with stimulating liniment, and occasionally applying a mustard cataplasm to the pit of the stomach.

As medicine, I dissolve half a drachm of carbonate of soda in two or three ounces of water, and with the addition of four or five drachms of fresh lemon juice, give it while effervescing, every hour, for three or four doses; afterwards once in four hours. For forty-eight hours I give no other medicine.

I have tried, in two instances, scruple doses of the muriate of soda with the same quantity of the carbonate; but the combination was nauseous to the patients, and no advantage was gained.

Generally, on the day after the attack, the patient passes a small fæcal evacuation, containing bile, otherwise I give, at the expiration of forty-eight hours, a drachm of castor-oil, or a few grains of rhubarb.

The active part of the above treatment requires the constant superintendence and watching of the medical practitioner from two to four hours, during which time I give the patient as much water, or toast and water, cold or tepid, as may be wished for, and no other beverage. For the next twenty-four hours I allow only weak black tea and thin arrow-root; and on the ensuing day a little broth or light

pudding, my patient now being generally convalescent; indeed, it is remarkable how rapidly recovery ensues, considering the late direful state of the individual.

The plan may require some modification when treating young or aged persons.

Lancet, Sept. 2d.

3. *On the Treatment of Cholera by Carbon and Carbonic Acid.* By W. Price Evans, Esq., Surgeon, Swansea.—Mr. Evans, addressing the Editor of 'The Lancet,' remarks: When I penned the letter you did me the honour to insert in 'The Lancet,' *ante* p. 247, I had not read the communication of Dr. Parkin recommending carbon, or rather carbonic acid, in the treatment of cholera. Either Dr. Parkin, or your humble servant has a very confused notion as to the respective properties of charcoal and carbonic acid. Quoth Dr. Parkin, "Knowing that carbonic acid combines with, and renders innocuous putrefactive and other substances injurious to animal life, it is neither unreasonable nor unscientific to conclude," &c. It is evident, from what follows, that it is carbonic acid the Doctor means, and that it is no misprint for charcoal. Now, as carbonic acid does *not* possess the properties ascribed to it by Dr. Parkin, I will, *meo periculo*, venture to assert, that it is both unreasonable and unscientific "to conclude that this gas neutralizes the effects of those noxious and excrementitious matters, which always exist, to a greater or less extent, in such situations."

Fresh charcoal, on the other hand, possesses in the highest degree the power of absorbing the gases—a fact which, in connexion with others concurrent, induced me, in your last journal, to record my conviction that it had 'the property of absorbing the choleric virus.' According to Mr. J. C. Atkinson (The Lancet, p. 220), naphthaline also is endowed with the property of absorbing gases. The extract below, from Dr. Ure's Dictionary, will justify me in considering and recommending fresh charcoal as an important preventive and remedial agent, more especially now that the death-tread of the fell cholera is daily heard approaching near and still nearer to our shores.

The following is a tabular view of the volumes of the different gases which were absorbed in the course of twenty-fours by one volume of charcoal, in the experiments of M. Théodore de Saussure, which were conducted in a way likely to produce correct results:

Ammoniacal gas	90	Bicarburetted hydrogen	35·00
Muriatic acid gas	85	Carbonic oxide	9·42
Sulphurous acid	65	Oxygen gas	9·25
Sulphuretted hydrogen	55	Nitrogen	7·50
Nitrous oxide	40	Carburetted hydrogen	5·00
Carbonic acid gas	35	Hydrogen gas	1·75

The introduction of coke as an article of fuel for household purposes, would ensure a regulated supply of it in the fresh state on the premises, so that all who used it, would, in and about their houses, have a surface of coke of more or less extent presented to the atmosphere.

This view of the subject being admitted, it is obvious that the

administration of fresh charcoal would be likely to prove useful in other cases, such as in those of cattle, after partaking largely of green food, where enormous distension ensues, consequent on the extrication of the gases.

Lancet, Sept. 9th.

4. *Treatment of Cholera by Stimulants, Mercury, and Sesquichloride of Iron.* By J. R. Hancorn, Surgeon, Shoreditch, M.R.C.S., &c.—It appears to me requisite to call upon the Royal College of Physicians, or the Central Board of Health, to come forward and propose some distinct line of treatment for the guidance of the profession generally, the majority of whom are in a state of great uncertainty as to the best mode of meeting the enemy.

In the absence of an authorized mode of treatment, it behoves every practitioner who has had an opportunity of witnessing this direful disease, to come forward and show his experience for the guidance of others. This is my present object, and I propose to offer a systematic course of medicinal remedies which, in 1831-2, I found most successful in a large majority of my cases, a treatment sanctioned by Dr. Warden, then surgeon of Sheerness dockyard, Dr. Gooch, of the *Ocean* flagship of the same port, and other surgeons, and published in the 'Lancet' of that period.

Cholera is sometimes ushered in by simple diarrhœa, and at other times commences at once in the most aggravated form, and terminates in death in the short period—as I have witnessed—of four hours. If the attack begin with a feeling of nausea, a very gentle emetic may preface the other remedies—as two scruples of powdered ipecacuanha. But if merely uneasiness and relaxation of the bowels occur, then a pill of two grains of extract of opium, and four grains of calomel may be given, followed in two hours by three quarters of an ounce of castor-oil. About two hours after this, give two tablespoonfuls of the following mixture every two, three, or four hours, according to the urgency of the symptoms: Sesquicarbonate of ammonia, a scruple; sesquicarbonate of soda, a drachm; aromatic confection, a drachm; tincture of capsicum, thirty minims; sedative solution of opium, thirty minims; camphor mixture, to six ounces: mix. To take mercury with chalk, three grains: powdered capsicum, three grains; mix for a powder to be taken every four hours, as well during the collapse stage as that of the simple diarrhœa, always taking care the mercurial preparation be not carried too far. It is of the utmost importance to keep up the secretion of the liver, the proper action of which will be found to be the great security against the after consequences; viz. typhus fever.

Should the real Asiatic cholera supervene, I would strongly urge upon my professional brethren to try the styptic remedy which I found so remarkably successful in 1832; viz. tincture of sesquichloride of iron. This was my sheet anchor, and I gave it in as concentrated a form as possible immediately after every ejection.

Whatsoever may be the nature, cause, or original seat of disease in Asiatic cholera, the effect produced appears to be an atony of the secretory and excretory ducts and mucous follicles; it therefore follows, as a natural indication, to restore power and tone to these vessels as

speedily as possible, and this is best effected by the administration of styptics. When I used the tincture of sesquichloride of iron, in 1831-2, its immediate effect in reducing the quantity of fluid ejected was truly astonishing, and it gradually diminished after every dose, until it ceased altogether, and the cure was effected. It should be remembered, that after this medicine, the evacuations, instead of being like rice-water, are black (the effect of the iron); this should be explained, otherwise the bystanders become much alarmed.

As a local application for the relief of cramp, I have found the following liniment far preferable to mustard poultices, not only from its stimulating properties, but because the requisite friction in using it is in itself efficacious: Strong sulphuric acid, a drachm and a half; olive oil, an ounce and a half: mix for an embrocation. The only objection to its use is its destructive action on the linen, which is of very little importance considering the direful nature of the malady. The hot-air bath should, also, be had recourse to; this is effected by means of a small spirit lamp and apparatus on the principle of Sir H. Davy's safety-lamp, which is merely placed under the bedclothes, so that any degree of heat may be quickly induced. I cannot too strongly urge the avoidance of *brandy or large doses of opium; they both enervate the system*, prostrate the vital energies, and do more harm than good. Though the extreme coldness of the surface of the body and of the tongue—nay, the coldness of the breath itself—would seem to indicate the former, it is not so, for the patient complains of the most agonizing thirst, and intense heat in the hypogastric region, which is best allayed by the free use of iced soda water and iced champagne, and small pieces of ice retained in the mouth and occasionally swallowed.

Lancet, Sept. 9th.

5. *Treatment of Cholera by Tartar Emetic.* By Dr. Radcliffe Hall.—The ordinary mode of proceeding was as follows: Five grains of tartarized antimony were dissolved in half a pint of camphor mixture; of this an ounce was given every two hours. The patient was urged to drink freely of toast-water. Immediately, or in a short time after the first dose, vomiting occurred, and was encouraged by the toast-water. After a time, the patient usually objected to the copious drinking of the water, and required much urging to persevere. Perseverance, however, was strongly enjoined. It was noticed in nearly all the fatal cases, that the objection to continued drinking had not been overcome. This plan was unceasingly persevered with, presenting a scene of incessant drinking and throwing up, until the stomach became tolerant of both the antimony and the fluid. The mixture was then continued, with less drinking of toast-water, so long as the symptoms required it. Simultaneously with, or shortly after the cessation of, vomiting, the symptoms usually improved. The good signs were these: warmth of tongue, gentle warm perspiration, and secretion of urine; increased volume of pulse, subsidence of cramps and of diarrhœa, and less of the extreme dejection of mind: sometimes a little bile in the matter vomited, or a bilious stool. The antimony was now discontinued, the patient allowed to remain quiet, warmth applied to

the feet, and a little arrow-root gruel given, flavoured or not with brandy, according to circumstances. The patient generally fell into a quiet sleep, and awoke feeble, but feeling comparatively well, and in good spirits. The action of the bowels was next attended to by giving castor-oil, and very little other than hygienic treatment was needed subsequently. When the cramps attacked the abdomen, sinapisms were applied until the effect of the antimony had had time to remove them.

The advantages of this treatment were found to be—1, its superior efficacy as a means of cure; 2, its speedier operation in curing; 3, the absence of the fever of reaction, with its accompanying risk of pneumonia and other serious lesions, a result not ordinarily attending any of the other methods of treatment.

The *rationale* of this treatment—homœopathic in theory, heroic in practice—is easily deduced from the known pathology of cholera. All we know of the facts of cholera is summed up in few words. After exposure to the influence, the subject sickens, there is extreme prostration of mind and body, shock of all parts of the system, a check to all natural secretion, inability on the part of the vascular organs to circulate the blood properly, want of blood on the surface, superabundance of blood in the viscera, a gorged state of the internal veins, effusion of the serous part of the blood through the gastro-intestinal mucous membrane, and, consequently, serous vomiting and purging, deficient animal heat and cramps. What, then, are the indications?

1st. To restore the circulation by dislodging the gorged internal vessels of their contents by sending blood to the surface, and so to gain time.

2d. To follow Nature's indication of ejecting the *materies morbi*, without allowing death to ensue in the meantime; or otherwise to follow, *to a safe extent*, Nature's own plan of action, until the morbid agency ceases to exercise its deleterious influence.

3d. To restore fluid to the drained and inspissated blood.

4th. To restore secretion.

Theoretically, we might have doubted the safety of exhibiting a prostrating remedy like tartar emetic in a disease attended with prostration like cholera. On such a principle we should not bleed in peritonitis. But the prostration of cholera is kept up by the almost stagnant circulation in the capillaries, and the engorgement of the veins, conditions which antimony, when absorbed, has a tendency to obviate, and which, as an emetic, both mechanically and through the ganglionic nerves, it tends to overcome. The distinction between spontaneous vomiting and vomiting artificially induced must be borne in mind. The former exhausts far more rapidly than the latter.

Lancet, Sept. 16th.

6. *Treatment by the Internal Use of Chloroform. Case by* Mr. Brady, of Harrow.—Mrs. Kidney, æt. 55, of very delicate constitution, was attacked on Thursday, the 24th ult., with diarrhœa, for which she took a dose of "rhubarb and brandy." The diarrhœa not having abated on the following morning she sent to me for a remedy; and,

conceiving that it might have depended on irritation induced by indigestible food, I ordered her the following draught:

℞ Olei ricini, ʒij,
Tæ. opii, ♏ xx,
Ol. terebinth., ♏ xx,
Aq. m. pip., ℥j.
M. ft. haustus.

This draught procured her a temporary relief; but during the night the diarrhœa increased, accompanied with severe tenesmus and spasm of the stomach, with vomiting of a greenish acrid fluid.

On Saturday morning, at seven o'clock, I was called in haste to see her. I found her labouring under the symptoms above named, with an extremely anxious countenance, and a quick and feeble pulse; the dejections watery, with a white curdy precipitate; tongue covered with a dark fur; the temperature of the body natural; urine suppressed. Ordered sinapisms over the abdominal and gastric regions, and the following medicines:

℞ Fellis. bov. inspis., gr. iv,
Hydrarg. chlor., gr. ij,
Capsici, gr. j.
Fiat pilula omni horâ capienda.

℞ Mist. cretæ, ℥iij,
Ammon. carb., ℈ij,
Tæ. opii, ʒiss,
Catechu, ʒvj.
M. Capt. ℥j, omni horâ.

Ten o'clock a. m. Vomiting and diarrhœa still continue, accompanied with excruciating spasm of the stomach and severe cramp in the legs. The difference in the aspect of the patient is remarkable: the features collapsed; the eyes deeply sunk, and the expression that of total apathy; pulse almost imperceptible; extremities cold, and finger nails blue. Ordered mustard poultices to the calves of the legs and soles of the feet, and gave ten minims of chloroform in weak brandy and water; the nausea ceased at once. After a few minutes I inquired how she felt; she said that "she felt the medicine warming her all over."

Eleven o'clock a. m. No vomiting or purging; aspect much improved; pulse remarkably raised, as well as the temperature of the whole body. Ordered rice, milk, and a little wine negus.

Twelve o'clock. Still improving; spasm in the calves of the legs occasionally recurring. I now gave a second dose (of five minims) of chloroform, and by two o'clock p. m. every symptom of the disease had vanished, with the exception of extreme debility, from which she gradually recovered. During the attack thirst was excessive, but everything drunk was immediately rejected, until the first dose of chloroform had been taken, when the vomiting ceased entirely. I have given it in five cases of simple cholera, occurring in athletic labourers, in doses of fifteen and twenty minims; and, although it invariably raised the pulse and spread a sensation of warmth all over the body, the diarrhœa appeared to have been but little affected by it; the vomiting, however, is generally subdued in a most remarkable

manner; and I am inclined to think that, in small doses, it will be found to be the most effectual remedy we possess in subduing the irritability of the stomach which accompanies many idiopathic affections.

In no case in which I have yet given it, even in doses of twenty minims, did it appear to exert the least narcotic influence on the brain. If it affected the cerebral function at all, its influence seemed to be that of a mild stimulant, the exalted action producing, however, no subsequent depression. This quality must render it peculiarly adapted to the treatment of malignant cholera, in which opium, ammonia, ether, and the large quantities of alcoholic fluids, that are usually administered in severe cases, even granting that they relieve the urgency of the symptoms in the earlier stage of the disease, must inevitably add to the depression and collapse, which are its most marked and unmanageable features towards the close.

In the severe cases in which I have successfully given it, after the irritability of the stomach and bowels and the severity of the cramp have been subdued, a pleasing slumber is enjoyed; but this is evidently not the stupor of a narcotic, but the quiet resulting from a sudden alleviation of pain and anxiety.

The exemption of the brain from its influence as a sedative is remarkable, considering how speedily a comatose state may be induced by its inhalation; but the dose of a volatile fluid which will produce a narcotic effect when inhaled will be no criterion of the quantity which may be introduced into the stomach with safety; and the converse is also true. A large quantity of carbonic-acid gas may be introduced into the stomach with impunity: we know how fatal is its inhalation in comparatively small proportion; and the dose of ether sulphuricus which has been inhaled during some severe operations would, if taken by the stomach, have very probably induced fatal narcotism.

Case by Mr. Plimmer.—The following case of Asiatic cholera resembles in every symptom the one communicated by Mr. Brady.

The patient, æt. 35, of slight stature, always enjoying good health, had slight diarrhœa on the evening of the 14th inst. At four o'clock a. m. on the 15th, vomiting came on very violently, with spasm affecting all the extremities; this continued, with diarrhœa, to increase till eleven, when I saw him, his symptoms being precisely the same as Mary Parrott, but, if possible, more aggravated. I determined on giving chloroform, after giving hydr. chlorid. with opium, which was immediately rejected. I gave the following mixture: Chloroform, ℥ vj; brandy, ʒiij; water, ʒiiss. I gave a third part, which was thrown up in half an hour; I gave him a second dose, which was retained: the vomiting and diarrhœa ceased; the spasm less severe. I gave him, in two hours, the remaining part, and during the next six hours I administered, in two doses, six minims more of the chloroform with the most decided benefit; and he is now, the 17th inst., convalescent. To the extreme tenderness over the region of the epigastrium I applied flannel soaked in rectified spirits of turpentine. I observed there was no urine secreted, and I am firmly of opinion that the usual remedies would not have met this case. I candidly confess I had no hope of success, from its severity, and but for Mr. Brady's case, I believe I should have lost my patient.

Medical Gazette, Sept. 16th.

[It should be remarked that these cannot be considered as instances of genuine malignant cholera, as up to the present time (Sept. 9th) there is no evidence that the epidemic has reached this country.]

7. *Reported Specific for Cholera.*—An alleged remedy against the cholera has been communicated to the Board of Health by an officer of rank, long resident in India :

Ingredients.—Assafœtida, opium, black pepper pulverized. These ingredients, more or less pure, will be found in every town and village.

The dose for an adult is from a grain and a half to two grains of each, made into a pill.

The medicine should be made up into pills of one dose each, and kept for use in a phial well closed, as it is of great importance to check the disease the instant of its attack.

The best mode of administering the pill is not by swallowing it whole, lest it be rejected in that state, but by chewing it and swallowing it with the moisture of the mouth, and a very little brandy and water to wash it down. The next best way of administering the medicine is by bruising the pill in a spoonful of brandy and water, and then swallowing it.

Much liquid must not be given ; but to relieve the thirst, which is great, brandy and water by spoonfuls occasionally is the best mode.

The dose should be repeated every half or three quarters of an hour, according to the urgency of the symptoms, until they have been subdued. From three to five doses have generally been sufficient for this, although as many as eight have been given before health has been restored in bad cases.

Should great prostration of strength prevail, with spasm, or without spasm, after the other symptoms (vomiting, purging, &c.) have been subdued, the medicine must not be wholly left off, but given in half or quarter doses, so as to keep up the strength and restore the pulse.

Friction, with stimulating liniment of some kind, ought to be applied carefully to the stomach, abdomen, and legs and arms ; and when pain in the stomach has been severe, and there was reason to fear congestion of the liver, eight or ten grains of calomel have been given with good effect.

In cases of collapse and great prostration of strength, the application of the tourniquet to the arms and legs has been recommended, in order, as it were, to husband the vital power by limiting the extent of the circulation. This may be tried, using a ligature of tape or other substance, if the tourniquet be not available.

The favorable symptoms of recovery are, restoration of the pulse, returning warmth of the body, and sleep ; and after being refreshed by sleep, the recovery being complete, a dose of castor-oil may be given.

[Several writers have very properly noticed the danger as well as absurdity of supposing that any advantage is to be derived from the above, more especially from so minute a dose of assafœtida ; they also call attention to the recommendation to give two grains of opium every half hour as one of a mischievous tendency, and likely to cause no small amount of danger, if the public, on the faith of the above communication, take the treatment into their own hands.]

SECT. II.—DISEASES OF THE NERVOUS SYSTEM.

Art. 4.—*On Nervous Influence and Derangement.*
By Dr. Henry Kennedy.

(*Dublin Medical Press*, April 19, 1848.)

[The object of the author, in the following paper, is to illustrate the proposition that "there are certain diseased states of the nervous system exactly analogous to those long recognised in the vascular system; and in many acute diseases this nervous derangement takes the precedence of the vascular disturbance;" in other words, that as there may be hyperæmia of the one, there may be also excess of the other. The author expresses his conviction that the appreciation of this principle will much simplify the study of many diseases. In working out this idea, the author proceeds as follows:]

In the greater number of diseases which affect our frames, inflammation plays a more or less prominent part. This inflammation presents a great variety of character It may be acute or chronic, typhoid, healthy or specific. It is modified by the texture engaged, by the period of life, and by numerous other circumstances. Hence we have inflammation treated by stimulants, tonics, anodynes, &c. Concerning several of the diseases alluded to, much difference of opinion exists as to treatment. To some of the latter I would direct attention. Acute rheumatism is met, even in the present day, by different, and even opposite modes of treatment, and each in its turn is successful, or may fail. Bleeding has cured some cases, while in others it has signally failed; and I do believe such patients might have been bled to death, and yet the disease would not have yielded. Yet to all outward appearance the cases where bleeding answered, and where it failed, were similar. Precisely the same has come under my notice as regards opium. It also has succeeded, and again failed, though pushed to the very utmost limits; and so I might go through the entire list of remedies. Now, how are we to account for these anomalies? That there must be some cause for such different results of treatment will, I think, be admitted. My conviction is, that a part, at least, of the difficulty will be solved, by a recognition of the principle I seek to establish. I believe that many cases of rheumatism, though presenting all the appearances of acute inflammatory disease, owe this to the deranged state of the nervous system in the first instance. I do not mean to say that the vascular system is not also affected; for I believe no form of inflammation can exist without both systems being engaged more or less, but merely that the nervous is more deeply involved than the vascular system in some instances; and if I may so speak, I would describe a nervous inflammation and a vascular inflammation, and that either may put on the characters of acute rheumatism. This idea appears to me to explain easily the reason why we can cure some cases with opium, and others with bark; both being medicines which I presume will be admitted to act more directly on the nerves than on the blood, as shown by their effects in that class of diseases which

come under the head of neuralgia. Or, again, why some cases can only be cured by bleeding, antimonials, &c. In point of fact, it accounts for the discrepancies which still exist on the treatment of the disease under consideration.

That nervous derangement may precede an attack of the most acute rheumatism can scarcely be doubted. I have frequently found, on inquiry, that, previous to the actual attack, the patient had been troubled with pains flying through the body, and clearly of a neuralgic character. As every one is aware, too, this is of frequent occurrence in persons afflicted with gout. Such will suffer racking pains through the ball of the great toe for a certain period, there being no other local symptom present, and then signs of inflammation will make their appearance. But probably this is more unequivocally shown in some neuralgic affections. Here you may have no symptom but pain for three, four, or five days, and then inflammation declares itself. This as most present may probably have seen, is by no means uncommon in cases of face- or gum-ache. Nor is this a matter merely for a passing remark. On the contrary, I have seldom seen such cases but that they were of a more obstinate character, and required treatment of a very different kind from what was suited to the more ordinary forms of neuralgia. It is important, too, likewise to remark, that the same individual may exhibit, at different times, these two forms of the complaint. A lady, now the mother of a family, was attacked, while at school, with neuralgia of the side of the head and face, of a very severe character. The pain seemed then to be confined exclusively to the nerves. She had several attacks of a similar kind, at a later period of her life. These were all cured by treatment, of which the chief part consisted in the use of the extract of stramonium, quinine, and wine-whey. About four years since she was again attacked with her old complaint; but though the same treatment was used as had cured her several times previously, it now was so far from doing so, that it seemed to aggravate her sufferings. In this way matters went on till the fifth day, when mild symptoms of inflammation showed themselves, in slight swelling of the side of the face, stiffness of the jaw, and a blush of redness on the cheek. It would be foreign to the present question to enter into an account of the treatment of this or similar cases. They are merely adduced here as good examples of the principle I seek to establish, which may now be expressed thus—that there are certain diseases attended by the signs of inflammation, but in which the nervous influence is the part primarily and chiefly involved.

But there are other affections which also bear strongly on this subject. Thus the disease so admirably described by Dupuytren, under the name of traumatic delirium, as also delirium tremens, are good examples of the class I mean. The latter disease, more particularly, is a strong case in point. Here you may have all the signs of inflammation existing, and to a very intense degree, and yet all experience shows that the disease must be considered as belonging to the nervous class; that it is to be treated by remedies which act on this system, and that anything of an antiphlogistic plan is attended with positive risk. It is worthy of remark, by the way, that as the excessive use of

strong drink acts so decidedly on the nervous system, so when a more moderate use of it is adopted—as when we order it for disease—it may reasonably be inferred that it also acts on the same system.

The consideration of delirium tremens naturally leads to that of fevers, whether belonging to the exanthemata or simple. Of the former I am satisfied that, by carrying out the views now under consideration, a step in advance in the treatment will be gained. I cannot enter here into particulars, but I may state that I have used opium with great benefit in a good many cases of scarlatina; I mean where the disease was still at its height. In smallpox the use of this valuable drug has been long recognised. In some cases, too, of simple erysipelas, or fever with erysipelas, as I believe this affection would be more properly called, I have pursued the same line of treatment, having been led to look upon such cases as instances where the nervous system was earlier and more profoundly deranged than any other. At the present moment I have under my care what, some days since, was a very severe case of erysipelas of the head and face. The patient is a girl, ten years old; and when at the worst, was affected with raving, and a considerable degree of stupor. There was great swelling of the inflamed parts. The treatment, from the second day of the appearance of the erysipelas, consisted chiefly in the use of wine, opium, and subsequently bark. She is now convalescent.

The last class of diseases to which I would advert at present is common Fever; but I must do this very briefly, and in the most general way possible. This part of the subject is of great extent, and, as I believe, importance. From the earliest period that fever has been described, it has been divided into several forms. Thus we have typhus, both congestive and inflammatory; we have synochus and synocha; we have bilious, gastric, and nervous fevers, &c.; and they are all divisions founded in nature. Now, it is scarcely necessary to remind you what a number of cases of fever, and of almost every description, are benefited by the use of wine—at least at some period of their course. During the past year numerous instances came under my notice, where, from the moment the patient was admitted, wine was given with the best effects. In other instances, again, preparatory treatment was had recourse to, or time was allowed to elapse, before it was given. In that class of fevers known as "nervous," experience has long since established that anything of pure antiphlogistic treatment must be used with great caution; and, on the contrary, that stimulants of one form or other are productive of the best effects. It may be mentioned in passing, that, during the last year, I have used the class of medicines known as tonics with marked benefit. The older authors recommended them strongly; and I rather think they are at present used less than they deserve to be.

Besides wine, there are certain cases of fever in which opium is of the greatest use. Dr. Graves has directed special attention to its administration in conjunction with tartar emetic; and I have often given it myself under the form of Dover's powder, as well as that just stated. There is one point which meets us in the management of simple fever, and which, as it appears somewhat of a paradox, calls for

a passing notice. I mean those cases where, at the same time that we use wine or opium, recourse is also had to local bleeding. This is easily explained. Congestion exists in such cases—as, for instance, in the brain; and at the same time that we are removing it, we have recourse also to the wine or opium.

In all those cases, then, of simple fever, where experience has shown that opium, wine, or other stimulants, are the proper remedies to use, I would explain their beneficial effects in the way already done, when speaking of other diseases—that is, that in such cases it is the nervous system which is chiefly at fault, and therefore the remedies known to act specially on it are the most suitable. It is, in point of fact, a state of irritation, and to be treated as such.

Enough has, I trust, now been advanced to illustrate the object I had in view in these remarks. It would, however, be very easy to have enlarged on the subject. Thus I might have entered into the general question of the treatment of certain inflammations by opium alone—a great improvement, for which we are indebted to Drs. Graves and Stokes, and which has been since followed up ably by Griffin and others. Your attention, too, might have been directed to the fact, that in certain cases of puerperal peritonitis, opium is now largely employed. Or I might have spoken of the use of the same drug in Pott's gangrene, and other forms of sphacelus, particularly those that are met with amongst children. Those cases of uterine hemorrhage, in which opium in very large doses has been found so beneficial, might also have been adduced as bearing on the subject; but it is time to conclude. Before doing so, however, it may be well to state, for fear of any misunderstanding, that when speaking of the treatment of certain acute diseases by stimulants and anodynes, I would not have it understood that such means were to be used invariably, or even in the majority of instances; neither would I wish it to be supposed that this treatment is simple and easy of application; I am well aware that it is not so. A consideration of these points, however, I have purposely omitted—at least doing little more than allude to them. But I must repeat that my wish has been to direct more attention to derangements of the nervous system; and this, in connexion with certain acute inflammatory diseases, than has hitherto been done. I believe that in the nervous system diseased states exist, which are very analogous to those of the vascular system, and that a full recognition of this principle will help to place the treatment of some inflammatory diseases on a more certain basis than at present exists. I believe, farther, that in certain inflammations, the nervous derangement alluded to frequently takes precedence of that of the vascular system, and that being more deeply involved, it should therefore get our more special attention. Hence, as it appears to me, we have a rational explanation of how it happens that the same disease—as, for instance, acute rheumatism—may, and has been often cured by very opposite modes of treatment.

Art. 5.—*Coma from Retained Biliary Secretion.*

By W. H. Ranking, M.D. Cantab.

(*Prov. Med. and Surg. Journal*, May 3, 1848.)

Dr. Ranking was called about eleven at night, three months since, to the son of an innkeeper, aged 13. It appears that he had returned from school a few days previously, and had gone to bed in apparently his usual health, at ten o'clock. About half an hour before Dr. R. saw him, he roused the house by a most piereing seream, and upon his mother reaching his room, he was discovered sitting up in bed, screaming loudly, and staring with an intense expression of terror into a corner of the room.

Dr. R. found him in this condition, and uttering piereing screams. The countenance was flushed, the eyes glistening, the pulse natural in volume, but a little quickened. He took no notice whatever of any one near him, but continued to stare wildly in one direction, in spite of every attempt to attract his attention. He had vomited once. While Dr. R. was making inquiries as to the antecedents of this formidable condition, he slowly fell upon the bed, and in a few minutes was in a state of complete insensibility. Leeches and calomel were immediately sent for, and in the mean time had him raised up, and kept a continual stream of cold water upon the head, first removing the hair; mustard cataplasms were also applied to the calves of the legs. As soon as they arrived a dozen leeches were applied to the temples; and ten grains of calomel were also put upon the tongue, to be repeated in two hours. Dr. R. staid with him an hour, and left him with returning consciousness, the leeches having bled freely, and the cold douches being continued at intervals of a few minutes. At ten in the morning he was perfectly collected, the bowels had been freely purged, an immense quantity of dark offensive bile having passed. He required no further treatment.

The writer's first impression on seeing this case was, that it was an instance of the sudden invasion of meningitis, an opinion which might have been countenanced by the boy's age, and by the fact that he had lost two brothers, or a brother and sister, of "water on the brain," and was himself of strumous aspect. But the rapid supervention of complete coma, and the absence of convulsions, at once disabused him of this view of the case, and he had therefore no hesitation in attributing the symptoms to sudden congestion of the brain, induced either by the presence of indigestible matter in the stomach, or by the retention of vitiated secretions elsewhere. The age was against the probability of the congestion being due to disease of the cerebral blood-vessels, as was his aspect against the suspicion of the agency of general plethora. Dr. R. states, however, that, under the urgency of the symptoms, and the clearness of their indications, he felt inclined to leave the pathology to be determined by the progress of the case. The first object was to relieve the cerebral vessels, which was done effectually by the combined effects of leeching, and the cold douche, the latter especially; the second was to remove the exciting cause, which, as the stomach had been freely evacuated, was judged to be seated in the intestines. This was accomplished by the calomel. Many, the writer observes, would have used the

lancet freely; and, as the result proved, by so doing would have inflicted a very unnecessary loss of blood—a loss more easily produced than remedied. The cold douche would, he is convinced, if properly applied, in many cases of threatened apoplexy, puerperal convulsions, &c., completely obviate the necessity of the wholesale bloodletting, too often indulged in in such cases; often, he believes, from the convenience with which the lancet is applied, and the little trouble it involves.

The result of this interesting case will, the author thinks, justify the diagnosis at the head of these remarks, the proximate cause of the symptoms being cerebral congestion; the remote cause, the retention of the fetid cystic bile which was dislodged by the calomel.

[For some excellent remarks on the production of coma by retained secretions, &c., the reader is referred to a paper by Mr. Corfe, (Medical Times, Oct. 9, 1847; or Half-Yearly Abstract, Vol. VI, p. 25.)

Art. 6.—*Head Symptoms from overloaded Bowels.*—[The annexed case appears to be similar to the above.]—A little boy, about ten years of age, on awaking one morning, complained of intense pain in the head, and soon afterwards he began to vomit, the sickness recurring at short intervals. About ten, he had a fit of an epileptic character, which lasted seven minutes, and within half an hour a second occurred, of the same duration. He was seen in the afternoon for the first time. The child was quite delirious, and did not appear to recognise his mother when she spoke to him. On being asked by the writer where the pain lay, he pointed to different parts of the room. The face was flushed, the eyes red and suffused, the skin hot and dry, the tongue furred, with a red tip and edges; the pulse beat 120 in the minute, and was of a full and sharp character. The vomiting had now ceased, and as the bowels had not acted during the day, three grains of calomel were prescribed, to be followed in two hours by a full dose of castor oil, intending to order a depletion of some kind when these remedies had well operated. At his visit in the evening, the writer found him on the close-stool, having just given passage to an enormous semifluid evacuation, which would have been large even for an adult; the motion was healthy in appearance, and had no unnaturally foul smell. The child was now quite rational, its face calm, its skin cool, and the pulse soft, though still frequent. There was no complaint of pain, except a slight griping in the bowels. During the night two full-sized motions, of a similar character, occurred. In the morning he was found well, and so he continued.

Prov. Med. and Surg. Journal, April 19, 1848.

Art. 7.—*Acute Chorea, terminating fatally in sixteen days.* By F. J. Brown, M.D, Assistant-Surgeon, R.N.

(*Condensed from MS.*)

William Tanner, aged 22, admitted into Haslar Hospital, under Sir John Richardson, 17th July, 1846. He had previously been, for a few days, in the Infirmary of the Royal Marines, at Portsmouth, where he

was purged and bled for cerebral symptoms, as headache, vertigo, with pain in the right hypochondrium. When admitted into Haslar he was cold and collapsed, with feeble pulse, 78. Under the exhibition of wine and water reaction ensued; the pulse rose to 84. Considerable jactitation, short cough, and perfect consciousness. Eighteen leeches were applied to the chest, and antimony and calomel exhibited.

18th. Had slept well, but complains of headache and pain in the right side. Scalp shaved and blistered. In the afternoon tossed his head about, and complained of pain in the occiput, pulse 72; strangury from the blister, which was relieved by mucilaginous drinks. Eighteen leeches to the nucha next day; considerable fever, with convulsive agitation and throwing about of the body and limbs. Two thirds of a grain of tartar emetic every four hours. At night the convulsive movements are great, and increased by the approach of any one to the bedside. Consciousness perfect. No tenderness of the spinal region; pulse 80.

21st. Jactitation was continued; no sleep last night. Liq. opii sedativ. ♏ 60, in three doses, procured sleep. The struggling comes on in violent paroxysms, but is never still except while sleeping. He spits with violence about his bed. In the evening, the convulsive movements excessive; he draws up his legs and kicks them out with force. Mouth and nose retracted to a great degree (risus sardonicus—Ed.) Mind now slightly affected during the paroxysms; pulse 80.

22d. Movements so excessive as to require a strait-jacket. Belladonna rubbed into the spinal region. Flatulence great, for which draughts of Sp. ammon. fœtidus were given. Croton oil caused immediate vomiting.

25th. Has continued much in the same state; this evening looks wild, and has daubed himself with his fæces. "His mind is diseased, he is raving, and constantly pulling his person about." Removed to the lunatic department.

From this period the patient became more and more exhausted, the involuntary movements continuing until near his death, which took place on the 29th July.

Post-mortem, 17 hours after death.—The body presented a mass of abrasions, produced by his struggling and throwing himself about the room.

Cranium. Brain healthy, slightly congested. Sinuses of the dura mater full of blood. A large coagulum in the left lateral sinus. Veins of the corpora specula congested; membranes about the pores also congested. Half an ounce of serum at the base.

Spinal cord. Firm and healthy; arachnoid investment and subjacent tissues presented numerous red streaks, and at the apertures at which the nerves passed out, exhibited an inflammatory redness; an ounce of fluid in the canal.

Thorax. Old pleuritic adhesions on the right side; lungs healthy; heart normal, or nearly so.

Abdomen. Liver enlarged, fatty; spleen fatty; kidneys healthy. Stomach empty, also healthy. Sigmoid flexure of the colon highly congested. Small intestines deeply congested; the ileum contained three invaginations. No other diseased appearance.

[Upon this unusual case the narrator makes the following reflections]:—

Reflections.—The following considerations occur to the reader of the preceding details. The subject of the disease was a healthy young man. He had been nineteen months in the marines, and was therefore neither a recruit, affected by the sudden change of life that necessarily follows enlistment, nor an old soldier, with a constitution impaired by excesses. He had never been in a foreign climate, and he was noted as being temperate and of good character. He had lately returned from Ireland, and was thought to be labouring under some trouble of mind. His illness must be considered as commencing six weeks previously to the 13th July, when he was suddenly seized with vertigo whilst on guard at head quarters. He continued to do duty after a few days' intermission, but found himself daily losing control over his lower extremities, and he experienced considerable weakness in them.

When he presented himself at the infirmary, his chylopoietic organs were in a state of derangement as regards their functions, and the nervous system was disordered; whilst the vascular system was unaffected.

There is no report of the condition of his stomach and bowels on his first seizure. The giddiness, and weakness of his limbs, are evidence of both the cerebral and spinal centres being in fault, whether primarily or secondarily cannot now be determined. His low state of spirits might exist in either case. On the 13th July, the ganglionic system was affected, together with the cerebro-spinal.

From his consciousness being perfect, the cerebral hemispheres may be excluded from consideration, and attention directed to the mesocephalon and its extension, and the ganglionic system.

The absence of vascular and respiratory morbid phenomena until a late period render the primary affection of the cerebro-spinal centres unlikely, whilst the pain in the right hypochondrium, which never ceased throughout the disease, connected with deranged secretions and imperfect natural functions, is an additional reason for not ascribing to those centres the first morbid agency. The quietness of his sleep furnished another reason to the same effect.

The secretion of bile and urea took place during the period he was under treatment; for the former was noticed in matters vomited and in his stools, and his urine was natural in appearance, though he suffered from dysuria.

The deranged secretions were exhibited principally in an extraordinary production of inodorous gaseous matter, and disordered peristaltic actions of the intestines, or inactivity was shown by costiveness; but as the bowels acted easily for the most part, when influenced by medicine, no mechanical obstruction of importance could have existed.

From the dysuria resisting ordinary remedies, it may be ascribed to the condition of the nervous system constituting the disease, but it must be remembered that turpentine and blistering had been used.

The muscular movements were noticed on the 16th July, and had been preceded by somnolency for two days. They ceased only with

death, except during sleep, which was perfectly natural and free from any phenomena of disease. The movements were irregular and variable, increased by the approach of any person, and paroxysmal: they were "fidgets" in excess. He was capable of combined movements, such as walking, but could not avoid jerking and irregularly moving his head and extremities, and his trunk also. The muscles of the jaw acted in a convulsive manner; but mastication and voiding of saliva could be performed.

The whole of his muscular movements were uncontrollable rather than convulsive. The muscles of the face contracted occasionally so as to alter materially the features. The eyeballs were not distorted or fixed, and the pupils were natural.

If the whole of the medulla oblongata were involved, it would be difficult to explain the exemption of the eyeballs from movements, and a fixed or tonic spasm was not the condition observed anywhere. It is remarkable that the pupils were unaffected, as disorder of the ganglionic system in children frequently produces alterations in the iris. It was noticed that the extensor muscles were most affected.

The cunning expression of his countenance it is difficult to understand, as his mind was not disturbed except at the height of a paroxysm, when it appeared to suffer from excess of misery.

There was an idea constantly present that his bowels were not open. The sensations experienced by him in the abdomen, and continuing after stool, were probably the reason he could not believe that he had had a motion. He felt but little relief, and was probably cognisant of the volvular sensation of intussusception, though he did not complain of such.

Restraint was shown to have an irritating effect on his mind. Singing was a strange symptom. He must have been in great distress, his body being excoriated, and his muscles tired.

Was it a condition of the mind succeeding the greatest discomfort sustained for the longest possible time—a state of involuntary comfort and endurance following involuntary discomfort and impatience, as a pendulum moves from one side of its arc to the other? Or was it the musical disposition or state of tune seen in Tarantism?

He never danced, and the effects of music were not tried upon him.

There was altered sensation, which was referred to the extremities of the nerves of the fingers and toes, such as burning; but there was no sensible heat in these parts.

He first complained of feeling ill on the 25th. To that day he always said he was well, but required his bowels to be open, and complained of pain in the right hypochondrium.

The pulling about of his person seemed entirely due to anxiety to get clear of the intense uneasiness that he felt in his abdomen. The intussusceptions might have caused this uneasiness, which, however, might be the consequence of the diseased condition of the spinal cord and sympathetic centres of the abdomen. The intussusceptions produced no mechanical obstruction to the passage of fæces, and no iliac vomiting.

It is probable they were made and unmade several times during the course of the disease, and arose from an abnormal action of the muscu-

lar parietes of the intestine, of the same nature as that affecting the locomotive muscles.

Dr. Good's explanation of the formation of the foldings may be called to mind, one part distended with gas, whilst spasmodic or inverted peristaltic action of another part accomplishes the involution. The stimulus of a purgative might enable the ordinary peristaltic movements to overcome those of an extraordinary kind.

In the case under consideration, however, there was no colic to evidence spasm. To this circumstance may be attributed the easy unfolding of the bowel, there being no constrictions.

There was abundance of gas and abnormal muscular action. These together gave rise to involution; but there was no spasm to continue it until feculent masses might obstruct the reduction, or inflammatory effusion cause it to be impossible. In examining the bodies of infants, I have seen two instances of intussusception twice or thrice repeated in the small gut, which had been unmarked by symptoms during life, death having occurred from a different cause. Was the intense congestion of the small intestine due to the intussusceptions?

If so, what caused the congestion of the sigmoid flexure of the colon?

It must be remembered that the patient took strong purgatives at various times. There were no inflammatory products; and he had not, during life, the symptoms of inflammation, viz. hard pulse, nausea, tenderness of abdomen, or obstinate costiveness. There was tenderness of the hypochondrium at the first, but it soon went off, though the pain continued. He died by exhaustion, and his consciousness was perfect.

The post-mortem appearances in the skull and spinal canal were probably effects and not causes of the disease; and I think the same may be said of those in the abdomen.

The sinuses of the skull being congested, and a clot being found in the left lateral sinus, might be expected to have given rise to different phenomena if they were causative. Congestion of the veins of the corpora striata might cause forward movements, according to Serres' views, but it has been noticed frequently without such effects. The congestion of the vessels at the base of the brain, and the serous effusion, half an ounce, are sufficiently common occurrences. The substance of the brain and cord was sound. The amount of fluid in the spinal canal, one ounce, was not abnormal. There was no evidence of inflammation of the meninges of the cord, no products of inflammation.

I greatly regret that Dr. Andrew Clarke, the Pathologist of Haslar, was not at the hospital at the period of this case, as his skill in the use of the microscope would have determined whether there were any exudation-corpuscles or not.

There was no lymph deposited on the membranous surfaces, and no opacity; and the red vessels were loose, and could be moved by the blade of the scalpel laid on flatly.

The analogy of this affection to chorea, in constant, uncontrollable movements of the muscles (except during sleep), aggravated by observation, is so great, as to leave no doubt of its coming under this genus.

Flatulence and tympany were noticed in the earlier forms of chorea that appeared in the thirteenth and fourteenth centuries.

The difference of result betwixt ordinary chorea and the case under consideration, and the short course of the latter, need not excite wonder, when the violence and continuance of the movements be taken into account. Indeed, it is difficult to understand how those extraordinary cases on record,—as of a little girl by Dr. Watt, mentioned in the 'Library of Medicine,'—where revolutions and other movements were continued for months, could have had a favorable termination.

This case appears to me to have been chorea in an acute form, and calculated to illustrate the nature of that disease, which is a morbid condition, non-inflammatory, of the ganglionic and cerebro-spinal centres, not affecting the cerebral hemispheres.

The symptoms are those of disturbed natural and animal functions, whilst the vital remain unaffected.

The mind is liable, in some cases, to some impairment, as might be expected in hypochondriac affections.

The true pathology may be, however, a morbid condition of the ganglionic centres, the animal phenomena being the result of reflex action through the cord.

The treatment employed exhibits the inefficacy of mercury in alterative doses, also of narcotics.

Opium was given in considerable quantities with but little effect, for he slept but nine and a half hours in as many days, and felt no calmative effect from the drug.

As much as 660 minims of laudanum and sedative liquor of opium were administered in ten days, and the cannabis indica was equally ineffectual; as also belladonna rubbed over the spine.

Bleeding and enemata afforded most relief.

It appears to me that, after premising the treatment by depletory measures, steady action on the bowels and chylopoietic organs, by warm purgatives and clysters, together with the use of nervines or metallic salts of copper, silver, arsenic, zinc, or iron, would offer the best chance of success.

Remedies directed to the improvement of the natural functions were strongly indicated; and, secondarily, tone to the nervous system.

If ether had been in use, its inhalation would have been a trial of the narcotic plan of treatment in a form fitted quickly to affect the nervous system.

Chloroform may be an agent of some utility in future cases, for its action has some resemblance to that of prussic acid, producing tonic spasm; and I think it better to apply to practice, in nervous diseases, the axiom, "similia similibus curantur" than "contraria contrariis opponenda."

Art. 8.—*Chorea treated successfully by Chloroform.*—Mr. Harris, of Botesdale, relates the following:—The patient was in her seventeenth year. The immediate cause which gave rise to her complaint was fright, the system being, doubtless, predisposed to its influence, owing to a chlorotic state of constitution. The ordinary remedies,

purgatives, either simply or in combination with one or other of the mineral tonics, constituted the general treatment for the first ten days of his attendance. The symptoms gave, however, no perceptible evidence of any improvement; the involuntary muscular movements of the extremities especially, as well as those of the face (causing the countenance to be at times hideously distorted), continued rather to increase than otherwise, which, together with a constant state of watchfulness by night and day (in spite of opiates), contributed not a little to her exhaustion and suffering.

The chloroform was used every day for a week, preserving its influence with her on each occasion for about half-an-hour, when the muscular movements became almost magically arrested. Upon recovering from its influence the muscles again renewed their excitement, but with perceptibly diminished intensity of action. The night rest also became good, and opiates were unnecessary. Believing that these beneficial results might be attributed mainly, if not wholly, to the chloroform, Mr. Harris continued its use twice a day for a week longer, extending its influence over an hour each time. It is deserving of mention that medicine was also regularly persisted in.

Lancet, June 3d.

Art. 9.—*A Severe Case of Facial Neuralgia successfully treated by Creasote.* By Thomas Kelly, Esq., of Donaghadee, Surgeon, &c.—Some time since the author was requested by the relatives of a lady who resided in this place to visit her, as she was labouring under a severe attack of facial neuralgia. She seemed to be a person about the middle period of life, and otherwise of a healthy constitution.

Previous to his visiting her, she had been under the treatment of two other medical gentlemen, who had administered various forms of antispasmodics and narcotics, all of which afforded her no relief.

On his visiting her, she stated that she had been several days ill with the present attack, and had suffered under the disease periodically for many years.

A violent paroxysm attacked her in his presence: she fell senseless on the floor. The convulsive twitching of the muscles of the face at once proved it to be a true case of facial neuralgia. Ordered—

℞ Creasoti, gtt. iij;
Micæ panis, q. s. ut ft. pil. iij.
Sig. i. tertiis horis.

In six hours afterwards Mr. K. saw her; no return of paroxysm; she expressed herself grateful, as she had not had so much remission from pain for many days. Ordered—

℞ Ol. ricini, ℥j,
Aq. menth. pip., ℥j.
M. ft. haustus hora somni.

On the following morning he again visited her; she had one paroxysm during the night, but much milder than before; she had had some chocolate and dry toast for breakfast.

℞ Rept. pil. ut heri.
Sumat. i. meridie nocteque.

On the next day there was no return of disease; she seemed quite happy and in excellent spirits. The treatment was discontinued, and it is now more than a year since, and there has been no return of disease whatever.

Dublin Med. Press, Sept. 13th.

ART. 10.—*Remarkable Case of Hysteria.* By R. WEST, Esq., Surgeon.

(*Edinburgh Med. and Surg. Journal*, April, 1848.)

On the 8th of September, 1842, the author was sent for to visit Miss Susannah A., a slightly-formed delicate-looking girl, aged nearly 12 years; rather tall for her age, with fair hair and complexion. She had for some months before complained of occasional pain in the side, with now and then slight difficulty of breathing. On this occasion the difficulty of breathing was a good deal increased, every inspiration being accompanied with a wheezing noise. The author looked upon the affection as spasmodic, and prescribed accordingly.

Sept. 10th. She felt better; but observing a kind of smile on the patient's countenance, it struck him that the case was one of hysteria, which was proved to demonstration by taking advantage of the involuntary imitation which is characteristic of that affection. Perseverance with antispasmodics was still indicated.

The next evening, September 11th, being Sunday, the author was sent for suddenly, and found his patient in a violent hysterical paroxysm, which, notwithstanding the application of mustard poultices to the nape of the neck and the calves of the legs, continued unabated for more than four hours. This paroxysm was characterised by the ordinary series of screamings, laughings, cryings, chokings, and strugglings with her attendants, being accompanied by the usual inability to swallow. The next evening the fit came on at the same hour, but mustard poultices being applied at once, it lasted only about an hour. This kind of counter-irritation was applied every evening for the remainder of the week, but by the Sunday following, September the 18th, its good effect was almost entirely lost, as the fits had become every evening longer and longer. During this week the different antispasmodics had been given without the slightest benefit, besides blistering the nape of the neck.

Throughout the next week the fits continued to recur every afternoon earlier and earlier; they were also every day longer and more violent, being attended with screamings loud enough to be heard at the distance of a mile; and the patient could not be hindered from frequently running out of doors and exhibiting various strange antics in her father's yard, such as running nimbly along the tops of some palings, and performing similar feats of extraordinary and unnatural agility.

About the 25th of September there began to be a short fit every morning, which at first was only about ten minutes in duration, but gradually increased in length until the 7th of October, when, after an emetic, which was given to her on that day, the morning fit lasted until the time for the afternoon one to begin; and henceforth she had

but one series of fits in the twenty-four hours, lasting, at this date, from six in the morning until five in the evening.

On Sunday, the 2d of October, a very marked change took place. In addition to the continued hysterical condition, she began to have, regularly every hour, a paroxysm lasting about ten minutes, in which she lay extended on the sofa, perfectly rigid and perfectly straight. The extensor class of muscles chiefly was excited; the arms were held straight upwards, and there was a continual snapping of the jaws. Dr. Mason Good describes a somewhat similar condition under the name of *ecstasis*. It was not *catalepsy*, for the limbs were perfectly immovable. This state ceased quite suddenly every time; the patient would jump up from the sofa, and, relapsing into the simple hysteric state, would continue running about, laughing, crying, and screaming, until the next rigid fit.

The next Sunday, October the 9th, there was another change. A fit of *ecstasis* came on every hour, in which the position was the same as in the last described; but it was attended with tremblings, and there was no snapping of the jaws; and in place of the latter symptom, she would, every minute or so, raise herself up and knock her head backwards on the sofa three or four times with great violence. We called these *knocking-fits*, for want of a better term. Her relapse into the simple hysteric state from every one of these fits was preceded, first, by a peculiar *curling* motion of the hands, difficult to describe—she looked as if she were *unscrewing* herself—by a sudden turning on the face; and lastly, by a *gasping* motion of the jaws.

On the following Sunday, October 16th, another change took place. And, in fact, it began to be remarked that a change of some kind took place every Sunday, and by this time it was looked for. She had a spasmodic fit every hour, as during the two preceding weeks, but it was now complete *emprosthotonos*, attended with a moaning noise, a ghastly grin on the face, and a chewing motion of the jaws, during which it was necessary to place something between the teeth lest she should bite her tongue; this grin being every now and then exchanged for another form of spasm, in which the mouth was fixed rigidly wide open, and the eyes were staring and unwinking. While in this condition of emprosthotonos, she would make painful attempts to rock herself from side to side. After a day or two had been passed with these fits, we thought of putting her into a child's cradle as soon as the spasmodic state came on, by which means the rocking propensity was easily satisfied, and her apparent distress was much diminished. She came out of every one of these fits by the same process as out of those of the week previous.

The following Sunday, October the 23d, in addition to frequent fits of emprosthotonos, she began to have some *cataleptic* seizures, each of which was prefaced by a strange series of manœuvres. Thus she commenced—after a trembling of the hands and head, by leaping wildly on the sofa, and then rather *flying* than running from one side of the room to the other, returning to the sofa backwards for another fly. Two of her sisters were usually obliged to attend, one on each side of her, during these *flying fits* as we called them, and hard work it was for the poor girls, for they were soon almost out of breath. These

flyings, after lasting about five or ten minutes, were always terminated by a sudden dropping of the head on one shoulder. She was then carried off by her attendants to the sofa, in a rigid cataleptic state. Her limbs could be bent, but it was like bending a piece of lead, and in whatever position they were placed so they remained. While lying in this condition, she crowed like a cock during every inspiration. This crowing gradually ceasing, a trembling of the arms came on, which increased in intensity until the movements had the appearance of *epilepsy*. After a few more minutes these movements ceased, and then, after a rapid winking of the eyes, she fell asleep, in imitation of the coma which usually follows epilepsy. After about five minutes of this sleep, she rose up, stretched herself naturally enough, and then relapsed into the hysteric state again.

The author here describes the manner in which the whole series of fits invariably terminated every day at this stage of the affection: "From being hysterical, she would become emprosthotonic for about one hour, being rocked, with the grin on the face. Towards the termination, she would have two fits of *inverted trismus*. Then the *curling* and other movements, described above, would take place; after which she would jump up quickly, snatch a pillow from the sofa, and walk into the kitchen. She would then march seven or eight times round the table, singing all the time, and finishing her march by suddenly jumping like a cat into the cradle. She would then leap up, march round the table six or seven times as before, and jump into the cradle again; for the third time she would repeat her marching and jumping into the cradle; she would then stretch herself out, and commence wringing her hands for a minute or two, after which she would, softly, and in a whisper scarcely audible, mutter "I am better."

To describe the distress of the family at this period would be quite impossible. In addition to the anxiety naturally caused by the anticipation, that, if the disorder continued to advance, so that the series of one day should run into that of the next, it must prove speedily fatal from the total inability of the patient to take any nourishment at all—there was the incessant bustle and confusion, all night and all day, caused by the actions of the unfortunate girl. When not affected by any of the spasmodic fits, there was an under current, so to speak, of hysteria constantly going on with her. This permanent hysterical condition, which was the foundation of the whole disorder, had some peculiarities which are worthy of record. The appearance and actions of the poor girl were quite those of a maniac. She was wont to converse in the most animated manner with those around her, but always preferred the most abhorrent subjects. She had nicknames, abuse, and even blows for every one that approached her, if by either word or deed her capriciousness was at all excited; for example, if any one offered to shake hands with her on leaving the room, she would double her fist, strike him a heavy blow on the face or shoulder, and with an exclamation "You old devil!" run out of the room. All this was so far from being her natural disposition, that she appeared throughout this strange affection to have two distinct and separate existences. In the one, she was a mild, weak, timid, gentle girl, not able to walk or stand by herself; in the other, she was a turbulent, noisy, strong, voluble hoyden,

keeping every one on the alert with attending, now to her caprices while merely hysterical, and now to her entirely involuntary actions when affected with spasmodic movements. These existences were distinct in another sense, for whatever she said or did while in the one state, she had no recollection of while in the other; this recollection invariably recurring with the return of that state in which the particular event took place. This peculiarity was frequently tested, and always with the same decisive result. But the point of dissimilarity between the two states which was of most importance, and which threatened the most serious consequences, as the complaint reached its acme, was the fact that it was only during the natural, or non-hysterical state, that the patient could take any food; that inability to swallow, which, in a greater or less degree, always attends the hysterical paroxysm, being well marked and complete throughout the whole duration of every series of fits. The poor girl's fantastic sayings and doings, while in the hysterical state, reminded one forcibly of the tales of possession of which we read in the Scriptures; another and a malignant spirit appeared to be speaking with the tongue, and acting with the members, of a being who was, in her healthy state, altogether incapable, either morally or physically, of such sayings and doings.

Nothing in the way of treatment had been of the slightest avail in checking the onward progress of the malady. The usual diffusible stimulants, including the fetid gums, were administered, in addition to counter-irritation with mustard poultices and blisters in the first instance, and subsequently with tartar-emetic ointment along the spine. The cold affusion was frequently used. Carbonate of iron in large doses was given, and oxide of zinc, nitrate of silver, and musk, were successively exhibited as tonics; quinine, as an antiperiodic; and purgatives, and alteratives, and full doses of morphine, were all administered alternately and successively. Thinking it possible that tape-worm was the cause of the irritation, we tried large doses of turpentine. But every thing was either perfectly useless, or, like the emetic, which was given one day with the idea that the shock of it might prevent the accession of the fit, did more harm than good.

On weighing her, it was found that she had lost only four pounds, which was somewhat extraordinary, considering the small amount of nourishment she was enabled to take, and the violent exercise she underwent every day. The manner in which she was in the habit of coming out of her catalepsy, when it did not run into epilepsy, was curious. The stiffness did not entirely cease until she had herself, with each hand, opened one by one all the fingers of the other hand from a semi-flexed position. The first set of fingers was opened slowly, because the hand which was the agent was still cataleptic, and proceeded by pushing itself clumsily against each finger; the other set was opened very quickly, because the hand which was then the agent was freed from catalepsy, and proceeded very dexterously. When every finger was opened, she would frequently exclaim delightedly, "They're all done now!" as she jumped up with a wild hysterical laugh.

Taking a hint from the success which had attended the use of the cradle in relieving the rocking propensity which accompanied the

attacks of emprosthotonos, I recommended that a *swing* should be tried, for the relief of all parties during the flying fits, which were daily becoming longer in duration and more vehement.

Nov. 22d. After three p.m. she has now every day *three* independent epileptic seizures, the first a very bad one; each going off into a disturbed sleep, which is followed by a fit of choking and retching, very distressing to all appearance. The hysterical states, with which these attacks alternate, are characterised by much singing in a low tone, and some screaming and laughing. Some time after the third epileptic fit, she goes off from the hysterical condition into a flying fit. They have got a swing for the flying fits, which answers perfectly. They find that if they delay long in putting her into the swinging or flying motion, her agitation increases rapidly; she appears to lose her sight, not being able to see the ropes of the swing, which she can readily do if carried or led to it soon enough; she also holds her breath in a painful way. This condition quickly goes off when she begins to swing; she becomes quite cheerful, laughs, and seems delighted. After swinging at least half an hour, she suddenly sinks into the cataleptic state, the crowing being very loud, and the mouth drawn alternately from side to side, while making an inspiration. She opens her fingers one by one as described above, and then, after being hysterical again for about half an hour, she suddenly doubles up into the emprosthotonic state. She was only ten minutes to-day completely free from her fits. She comes to herself every day at half-past eleven, after walking with the pillow as described above, and begins again with a swinging fit, fit succeeding fit all day and all night.

Nov. 28th. Nearly the same as last report. About ten minutes to spare for eating and drinking, but rather inclined to be hysterical at the same time. She has the same daily series of fits. They have counted thirty-one changes in the twenty-four hours, reckoning each hysterical state as a change, but considering the swinging, the cataleptic, and the accompanying crowing fits as one fit, inasmuch as they invariably form one process. The chokings, which now always succeed every epileptic sleep, are violent beyond description, and last a long time. During the choking there is sometimes a cessation for a few seconds, but then the epileptic twitchings take its place, and altogether the epileptic state is so much worse, that to-day the three fits of the afternoon, beginning at three and ending at half-past five, have run into one, that is, another fit immediately following the chokings. She has been observed to sweat very much during the night.

Dec. 2d. A change manifestly for the better. She has had an hour and five minutes free, and, as soon as she came to herself, declared herself better, and said she was sure she should have more time to-day. She missed one of the epileptic fits in the afternoon. Otherwise the same.

Dec 3d. One hour and ten minutes free. Rather more rational in the hysterical condition, during which she knitted a pair of garters for "the old fellow," as she calls her father.

Dec. 4th. Two hours and a half free. Missed the worst epileptic fit, so that she has now only one instead of three, and the chokings have entirely ceased.

Dec. 5th. Five minutes more. In the swinging fits she is more rational. She says, "make haste to put me in." She can leave the swing and run to the door. The fits of inverted trismus have ceased during the emprosthotonic attacks. She no longer walks with the pillow.

Dec. 10th. Three hours and three-quarters free, having gained a little every day since last report. Came to herself for twenty minutes in the afternoon.

Dec. 11th. Six hours and twenty minutes in her natural state, all in one period.

Dec. 13th. Still six hours and twenty minutes. More rational in the hysterical state, and still more quiet in the swinging fits. When seen at half-past six in the evening, she had just come out of an epileptic fit. She went into the swing at a quarter-past eight; swung half an hour and five minutes. The cataleptic state which succeeded was attended with occasional twitchings, though at the same time the rigidity was still truly cataleptic; the twitchings came on when she was not able to crow clear. She had also several stoppages, or rather holdings, of the breath, during which the face became flushed.* She opened her fingers before relapsing into the hysterical condition, as usual. This day, while hysterical, she sucked an orange and swallowed the juice. She is so weak, when quite right, that she can neither stand nor walk by herself, and looks now somewhat shrunken in the face. She slept for the first time on the sofa last night for three hours after an epileptic fit, that is, not doubled up. This sleep was altogether of a different nature to the short snatches of a few minutes which previously followed each epileptic seizure.

Sunday, Dec. 18th. All the past week continued to have from six to six and a half hours free. This day she had eight hours, but it was interrupted by an interval of a quarter of an hour, during which she was hysterical slightly.

Dec. 21st. Still eight hours free. Missed one emprosthotonic fit last Sunday, and another last night, so that she has now only two seizures of this kind in the twenty-four hours. She cast up a sum correctly this morning while in the hysterical state. This afternoon she was knitting after the two short swinging fits which commenced the series. Before she sat down to knit she scratched and fought her sisters. She knitted with great rapidity. When right, she is unable to knit or walk, or make the least exertion, apparently from complete exhaustion. Begins to have some recollection, when in her natural state, of events which have occurred to her when hysterical.

After this she continued to gain ground rapidly. There was, generally, a decided change for the better on a Sunday. Every week or so missed one or two convulsive or spasmodic fits.

Feb. 20, 1843. No convulsive or spasmodic fits at all. Hysterical for half an hour.

During this week, Miss A—— daily continued to regain the use of

* These holdings of the breath did not by any means seem to depend on a closure of the larynx, but rather on an apparently obstinate refusal to allow the muscles concerned in expiration to act; the breath escaping at last with quite a burst, when it could be held no longer.

her legs while in her natural state, and she was speedily as well and as strong as ever, with the exception of a slight hysterical attack every evening from half-past eight to nine. Some time in May her father took her to visit an uncle, who resided at some distance. Returning in the evening, they did not arrive at home till after nine o'clock. She had missed her fit. Upon this hint, therefore, we acted. Every evening she took a ride out on a pony, taking especial care not to come in before nine. Once or twice, when she happened, from not knowing the hour, to come sooner, the fit returned. This system was kept up till the days got too short; and then the little hysterical attack returned as before, every evening.

At the end of the first week in the following September, it being exactly a year from the commencement of the disorder, Miss A—— complained of feeling poorly. A few days after, her evening hysteria began earlier, lasted longer, and was accompanied by an epileptic fit. It was feared that her troubles were about to return, but it was a false alarm. The next evening she had no fit at all.

In September, 1844, it being just two years from her first seizure, she had a fit of hysterics, not attended with convulsive twitchings.

Since then she has had no return of her peculiar affection, at least in anything like a periodic form. A piece of ill news suddenly conveyed to her would bring on an attack; but that kind of thing is a different affair altogether. She did not menstruate until she was nearly sixteen; and, since the establishment of that function, she has been entirely free from hysteria in any form.

[The author's remarks on the above case are as follows:]

What was the irritation in this case? If it was uterine, it was strange that it should come on so early, before the average age at any rate; and stranger that the affection should be so much ameliorated, although the patient, having arrived at a proper age, had still not menstruated. And yet her complete restoration at the present date would almost seem to warrant the opinion.

Were the perspirations, which were observed just before the first favorable change took place, critical?

The recovery of this patient, without the aid of medicine or remedial means of any kind, is deserving of notice, chiefly for this reason. It is obvious that, but for the extraordinary severity of the affection, which, in its acme, did not give us an opportunity to try any plans at all, we should have continued to persevere in some scheme or other, and that that plan, whatever it might have been, which we might have been trying at the time when the malady began to decline, would have had all the credit of the cure. Let this be a lesson for us all.

I omitted to mention, and it was scarcely necessary to do so, that the different excretory functions were performed with sufficient regularity throughout, and in either state indifferently.

With reference to the regularity in point of time of the different seizures, and the steady advance and decline of the malady, it is somewhat remarkable that every *seventh* day should have been so noticeable throughout the whole period. Surely there is more than is "dreamt of in our philosophy" in the connexion between the human constitution and the days appointed by Infinite Wisdom for cessation from toil.

Since writing the above, I have had the opportunity, afforded me by the kindness of their distinguished author, of reading two excellent 'Essays on the Theory of Convulsive Diseases,' by Dr. Marshall Hall. It would ill become me to put forth any remarks, which would have the appearance of contradicting any one of the deductions of so acute an observer, and it is therefore with no little hesitation that I venture to observe that I am a good deal staggered by one of the statements contained in these essays.

At page 43 we read: "As a part of the epileptic seizure of the most pathognomonic character, I must briefly notice another symptom, . . . it is the *odaxismus*, or bitten tongue, lip, or cheek." And again, at page 57—"But when laryngismus, and especially when odaxismus occurs, there can be no doubt that the case is epileptic. This last is *the* most pathognomonic symptom of this dire malady." (Vide 'Abstract,' Vol. VII, p. 210.)

Now, in the case above feebly described, not once only, but some hundreds of times, we had this very symptom which Dr. Hall proposes to term *odaxismus*, occurring as an accompaniment of certain seizures of a tetan*oid* character. I allude to the very frequent attacks of emprosthotonos. There was no mistake about this symptom; it was one of those which gave the greatest trouble to the attendants in watching the patient. In the first seizure of the kind the tongue was cruelly bitten; it was seen to be necessary to do something to prevent this, and therefore, in every subsequent fit, the handle of a tooth-brush was kept in readiness to be thrust between the teeth. When the fits of inverted trismus took the place of this *odaxismus*, the tooth-brush dropped out of the mouth; the same occasionally when sleep came on in the emprosthotonic state: it was, consequently, necessary to watch carefully for the return of the moaning, that the tooth-brush might be replaced at the proper time. Miss A—— keeps this brush as a curiosity; the handle is indeed curiously worn, and indented by frequent bitings.

If these seizures were *tetanic*, then odaxismus may occur in tetanus as well as in epilepsy.

But they were not *tetanic*, they were tetan*oid*, I take it; that is to say, they were *hysteria*, simulating one of the forms of tetanus. *Odaxismus*, therefore, may occur in *hysteria*.

And yet, if the last paragraph quoted from Dr. Hall means any thing, it means that *odaxismus* cannot occur in any other affection than genuine epilepsy.

It will not do to say that the emprosthotonic seizures were simulated epilepsy, unless it be contended that odaxismus by itself, without any other convulsive movement, will constitute the affection. Odaxismus is pointedly said to be only a *symptom*. The rocking propensity in these attacks was not by any means a convulsive movement; it was an effort to relieve some uncontrollable sensation, which was effected equally well, nay better, when the body was moved from side to side by another person, as was done in the cradle. With the exception, therefore, of the movements of the jaw, there was nothing like convulsion present; the whole body was perfectly stiff, the flexor muscles being all contracted.

And again, it must not be said that no conclusion can fairly be drawn from symptoms arising in a simulated affection. The fact of odaxismus occurring at all as a simulated symptom, or in a simulated malady, must deprive it of its claim to be a test of the genuineness of any complaint whatever.

Nor would it be right to say that its occurrence in a single case only ought not to be taken to prove anything. The evidence afforded by one affirmative case must outweigh that of a thousand negative ones.

I repeat, that it is with much diffidence that I venture upon these remarks. I make them more by way of inquiry than assertion, as it is possible the matter may be capable of explanation.

Dr. Hall insists much on the fact, that complete laryngismus is necessary to cause epileptic twitchings. Now, the crowings which occurred in my case were specimens of the imperfect kind of laryngismus, which, he says, may occur in hysteria; and it is a curious confirmation of his theory, that a kind of epileptic twitching took place in the case, when the patient "was not able to crow clear,"—i. e. when the laryngismus was more complete. It is curious, as showing that even in hysteria, to which affection the theory is not applied, *simulated* laryngismus may cause *simulated* convulsions.

SECT. III.—DISEASES OF THE RESPIRATORY SYSTEM.

Art. 11.—*Clinical Lecture on the Varieties of Pneumonia.*

By J. F. Duncan, M.D.

(*Dublin Medical Press*, Aug. 9, 1848.)

Medical writers, in treating of pneumonia, recognise a number of varieties, some of greater, some of less importance in a practical point of view; but all of which it is necessary you should be acquainted with. They may be divided into two great classes, according as the distinctions are drawn from anatomical appearances after death, or the symptoms observed during life. In the first of these must be placed the vesicular, lobular, lobar, and hypostatic varieties; in the second, the regular, typhoid, and latent. At present, I intend to occupy our time principally with the last three of these as bearing more immediately upon the case under consideration. First, then, of regular pneumonia: This occurs usually in the young and vigorous, whose constitutions have been unimpaired by previous excesses, and who are liable to all the exciting causes of ordinary inflammation. It is characterised by high fever, dyspnœa proportional to the extent of lung actually implicated, pain in the chest, a peculiar cough, and occasionally, at least the specific expectoration of pneumonia. These symptoms, from their marked character, can scarcely fail to direct attention to the respiratory organs, and to lead to a careful examination. Anatomically, the disease has been divided into three stages: in the first, or that of engorgement, the lung is distended in volume, and does not

collapse on opening the thorax, as a healthy lung ought to do; its density is increased, though it may not absolutely sink in water; it is mottled externally, of a brown red colour and dingy aspect; it pits upon pressure, is not so tough and elastic as usual, nor does it crepitate freely between the fingers. On making an incision in the part, a quantity of frothy and sanguineous fluid exudes; the cellular structure is indistinct, and the bronchial ramifications of a brownish red colour, with rusty-looking fluid in them. The appearances now described are often confounded with mere congestions of the lung, the result of a mechanical gravitation of the blood from position during a period of impaired vital energy, and altogether unconnected with real inflammation. The question is important, and sometimes difficult of solution. Gendrin tells us that if a small stream of water be let fall continuously upon the part for some time, all the appearances now described, including the colour, may be made to disappear if they depend upon congestion solely, and the lung will resume the ordinary characters of health; whereas if they depend upon inflammation, the colour cannot be entirely removed, especially from the central portions, though the other alterations in density, permeability to air, and sensible properties may.

A nice point connected with the minute pathology of the disease is to determine the exact seat of the inflammation. The common opinion entertained by the profession has been that it is the parenchyma of the lungs that is essentially involved in pneumonia: and that the difference in the primary seat of the inflammation constitutes the real difference between it and bronchitis. A few modern writers, on the other hand, have maintained that instead of its being a distinct disease, it is really nothing more than a bronchitis affecting the terminal tubes and air-cells. The mucous membrane, in these last, they say, from its extreme delicacy, resembles the ordinary class of serous membranes, and resulting inflammation consequently assumes the character that naturally belongs to such membranes in preference to that which is peculiarly its own.

M. Gendrin, with his usual ability, has endeavoured to determine this point by direct experiment, and the result of his investigations is to confirm the common opinion, that these diseases are really distinct. He injected coloured fluids into the pulmonary artery, and invariably found them to pass readily into the minutest ramifications when pneumonia was not present, but never could succeed in making them enter the vascular network of the cells when it was. You are all probably aware that the lungs are furnished with a double set of vessels. The bronchial, derived from the thoracic aorta, and designed for the nutrition of the organ; and the pulmonary, from the pulmonary artery, which subserve the proper function of respiration. Now, it is not an irrational idea to suppose that in bronchitis the former set of vessels is principally concerned; and in pneumonia, the latter: and hence the difference between these two affections. Assuming this opinion to be correct, it explains a point of practical experience which has been long known as to the relative value of different kinds of bleeding in the two diseases. In bronchitis, local bleeding, by leeches or the cupping-

glass near the root of the lungs, has been found more efficient than the lancet; while in pneumonia it is just the reverse. Of course, I speak merely of the *general* result, without regarding those special circumstances which always modify our statements. Now, if the theory which I have advanced be correct, the local abstraction of blood will relieve the gorged and inflamed bronchial vessels in their neighbourhood more directly than a general bleeding could do, while the lancet, from its effects upon the system at large, must be more suitable to those cases in which the branches of the pulmonary artery happen to be engaged.

In the second stage, the lung is found dilated to its utmost extent; its specific gravity is increased so as to sink completely in water, while it is more solid to the touch, and destitute of the crepitating feel that even in the first is still perceptible. It is of a lightish brown red colour, and somewhat softened, so as to break easily under the pressure of the fingers. If an incision be made into it, the cut surface presents a number of flat granulations, which vary in size, according to the age of the patient, being smaller in the very young than in the old; and still larger in persons who have suffered from emphysema. These are the obliterated air-cells. Of the original structure of the lung, nothing but the larger bronchial tubes is observable: the gorged capillaries having effused their contents, decoloured globulin, serum and fibrin, into all the interspaces: while the decomposed blood within the cells is converted into a coagulated mass of very slender consistency. The time which may elapse before this stage is fully formed varies in different cases, but as a general rule, the younger the subject, and the more vigorous the state of health, the shorter the interval. Two or three days under ordinary circumstances are generally sufficient for the purpose.

In the third stage the density, volume, and want of crepitation under pressure continue as they were in the second, while the softening is more advanced. Disorganization of the lung, however, does not take place, as careful washing prolonged for a sufficient time, is capable of restoring the cellular texture to its original state. The colour becomes of a dirty gray or a lightish yellow. A section exhibits the same granular appearance as the second stage, while a yellowish fluid exudes spontaneously from the surface, or is easily forced out by gentle pressure. Mere exposure to the air will liquefy the coagulated mass that fills the parenchyma of the lung. The time necessary for the production of this stage is even more uncertain than that for the second; occasionally five or six days are sufficient, while at other times weeks may elapse before it occurs. The important point as to the pathology of the disease for you to bear in mind is, that the lymph and fibrine are effused in a fluid state, constituting the first stage; that they coagulate subsequently to form the second; and that they again liquefy to form the third.

Now, in regular pneumonia, each of these stages follows in their exact order: the disease begins below, and gradually travels upwards; it occupies the whole of one lobe before it extends to another, however close the connexion may be. In very young children an exception occasionally occurs, because the membranous septa which divide the

pulmonary lobules are relatively denser than in the adult, and hence a separation is more easily effected. From this circumstance the disease in them often assumes the lobular variety. The lungs, in fact, appear to present in infants some analogy to the kidney, which you know has a lobulated structure at first, that disappears as the child grows up.

There are several other circumstances connected with this subject into which I do not now enter, as I wish to pass on to the contrast between the regular and irregular varieties of the disease. Each of the three stages has its appropriate physical signs, on which I do not intend to dwell. These are, in the first, diminished amount of respiration; fine crepitating râle; slight dullness on percussion; diminished reverberation of voice to the applied hand; increased vocal resonance: in the second, bronchial respiration and bronchophony: in the third, large muco-crepitus, or crepitus redux, augmented respiration, and diminished dulness. Now, if the physical alterations in the lung which are the cause of these phenomena, commence below, and gradually proceed upwards till they involve the whole lung, it is obvious that the physical signs themselves must follow a similar course: hence we have three well-marked characteristics of the regular form of the disease. First, symptoms referable to the respiratory organs distinct and well marked; second, regular progression of the stages; and third, the physical phenomena beginning below, and gradually ascending upwards.

The two principal varieties of irregular pneumonia are the typhoid and the latent. Of the former we have happily had no example during the present session, but it differs essentially from that which I have been describing. The best account of it you will find in Dr. Stokes's elaborate work upon Diseases of the Chest. You are not to suppose that the mere occurrence of typhoid symptoms is sufficient to constitute the affection, for you will often observe pneumonia developed in the course of typhus fever, but presenting in every respect, except the occurrence of adynamia, the regular character. Its essential features are the rapidity of its course, the badly-marked gradation of stages, the almost total suppression of initiatory crepitus. The manner in which the whole lung seems to become solid at once, the early period at which suppuration occurs, and (contrary to what, under such circumstances, might be expected) the slowness with which resolution is accomplished, while the large loose crepitus that usually accompanies that change is seldom perceptible. This variety is extremely fatal, but its rarity corresponds to its severity. A few weeks after the workhouse was opened I met with a case which terminated fatally about the third day after admission, and on inspection the whole lung formed one mass of suppuration, uniform in extent in all the lobes, and not, as in the ordinary form, more advanced in the lower than in the upper.

Another point of difference consists in the typhoid form being almost always limited to a single lobe, whereas regular pneumonia seldom attacks the whole of one lung, without at the same time involving the other more or less. If to these remarkable features you add the striking fact that the prominent symptoms of pulmonary disease are often

absent or obscure, you have a collection of distinctive marks, sufficient to justify the most fastidious in considering it a separate species. I do not at present speak of the treatment suitable to typhoid pneumonia farther than to say that it must differ essentially from that in use in the ordinary form. All antiphlogistic measures, except mercury, and that administered in the mildest but most effectual manner possible, must be laid aside, and the patient's strength supported by tonics, nutritious diet, and wine, according as circumstances will admit.

The latent form, like the typhoid, differs from the regular in not observing the usual law of progression in the stages from below upwards. Sometimes you will find a very small portion of the chest in the second stage, and that not at the base of the lung, but it may be in the middle lobe, and the closest examination elsewhere will fail to detect in the surrounding parts the slightest crepitus, as indicative of the first stage. The principal feature, however, is the complete suppression of the usual symptoms of pulmonary disease: there will be no cough, no local pain, no difficulty of breathing, no expectoration. A physical examination alone reveals the existence of anything wrong with the respiratory organs. In typhoid pneumonia, it is true, you may have the same thing, but it is not invariable, and even when it does exist, it is scarcely matter of surprise. The state of stupor in which the patient is sunk, as well as the complete prostration of all the vital powers, so deaden his susceptibility to impressions both internal and external, that we can readily expect these symptoms should be very obscure, if they exist at all. The case is different under the circumstances we are now considering. In them no reason exists why these ordinary symptoms should not be manifest. Latent pneumonia is apt to occur under two very different conditions according as fever is present at the time or not. In the former, as in children suffering from the exanthemata, the pyrexia that is present, as well as the slight hurry of the breathing, are apt to be set down to the prominent disease, and so the deeper-seated but latent one may escape unnoticed. The same thing frequently occurs in delirium tremens; the attention of the physician is extremely liable to be directed exclusively to the state of the nervous system, yet it frequently happens that the inflammatory action, commencing in the mucous membrane of the stomach, creeps insidiously upward till a considerable portion of the right lung becomes solidified. What increases the difficulty in this case, is, that the patient is generally incapable of expressing his feelings so as to point attention to this dangerous complication.

But there is one class of cases to which I wish particularly to direct your thoughts, because I do not think it is sufficiently well known, although I can testify, from an extensive observation, that it is common enough; and that is, the frequent occurrence of latent pneumonia in connexion with acute hydrocephalus, and the convulsive affections of children. In this, as in the last instance, the *manifest* appearances are so alarming as to divert all attention from other topics, while in reality the former are essentially caused by the obstruction to the free circulation in the chest. On a multitude of occasions have I noticed this complication in the workhouse, when the two diseases were unfortu-

nately extremely common. But I cannot forbear mentioning the following example, which occurred in the north of Ireland: Happening to be staying for a few days at a friend's house, I was asked to see a little child about a year and a half old, who was said to be ill of water on the brain. The father had lost several other children by this complaint, and was naturally very uneasy at the thought of losing this. On arriving at the place I found all the ordinary symptoms of hydrocephalus well marked, but at the same time discovered it to be labouring under extensive pneumonia of both lungs; treatment directed to this had the happy effect of completely removing all the unpleasant symptoms under which it laboured.

But the same thing may exist when there is no fever present, or as little as in our patient Johnston, where the pulse was 76, the breathing 16, and the skin cool. I have met with an instance in a very little girl about four years old, who was observed, a few days after a slight feverish attack, to have a trifling cough. She was to all appearance perfectly well, free from fever, and in the best possible spirits. On examining her chest, there was one small spot, about as large, perhaps, as a hen-egg, where percussion gave a dull sound, and respiration was nearly inaudible. No crepitus could be detected. By appropriate treatment resolution took place, and she recovered perfectly. Several other cases came under my observation in the workhouse; among the rest a healthy woman of the name of Lacey, about 30 or 35 years of age, a deputy in one of the hospital wards, complained of a pain in the left side. She had no fever, no quickness of breathing, no cough, nor expectoration. On examining her chest, I detected dullness over a considerable portion of the anterior part of the lower lobe, which was somewhat tender to the touch. Respiration in the part weak and bronchial; vocal resonance increased. Appropriate treatment here, too, completely removed the disease.

The occurrence of inflammation in this low form unattended by fever, hurry of the breathing, &c., altogether contradicts the opinion commonly entertained in the medical world, and imposes upon us the greater necessity for physical examination in all doubtful cases. In percussion and the stethoscope, in our hands and ears, we have means of procuring information that eludes the grasp of our other senses, and it ought to be a disgrace to any member of the profession, in these enlightened days, to allow a single case of this kind to pass undetected. But the bare fact that pulmonary inflammation may assume a low unhealthy form is only analogous to what we know occurs elsewhere. Hasse, in his Pathological Anatomy, makes an observation that the case of Johnston seems to bear out; that is, that in persons habituated to the use of alcoholic stimulants, the respiration is habitually slower than in other persons, and that in delirium tremens especially this diminution in the frequency of inspiration is most remarkable. In this hospital, where cases of delirium tremens occur so often, you cannot want for opportunities of testing the correctness of this opinion.

In all cases of latent pneumonia I am in the habit of resorting to mercury in doses proportional to the urgency af the symptoms. Tartar emetic appears, to me, much as it is lauded in ordinary pneumonia, to be unsuitable, both because the remedy is too heroic for the low kind

of inflammation we have to deal with, and also because the first stage —that to which tartar emetic is peculiarly adapted—in these cases has passed away before we have an opportunity of recognising the disease. This, together with local depletion repeated from day to day, as the strength admits, are perhaps the most important means we possess of combating this obscure and insidious affection.

Art. 12.—*Emphysema of the Cellular Tissue following Hooping-cough.* By U. Herapath, m.b., Bristol.

(*Medical Times*, Sept. 2, 1848.)

A child, at eighteen months, was placed under the author's care for hooping-cough. She was ordered four leeches in the sternum, and small doses of tartarized antimony at short intervals.

The bronchitis was controlled in the course of four or five days by persistence in this treatment; the febrile symptoms diminished, and the whoop became more fully formed. The antimony was continued, but at longer intervals, during the whole of the subsequent week, in consequence of which the cough became less teasing and troublesome; and by the 15th the whoop had almost entirely ceased, but the spasmodic cough remained. At this time all fever had vanished; the child had lost its appetite, and its strength had considerably diminished; the pulse was small, weak, and rapid; the respirations were very short and frequent; more dyspnœa existed than the symptoms warranted; but little mucous râle remained; the face was pale and exsanguine; the lips almost white.

I prescribed one grain of the citrate of iron and quinine three times a day, with a little syrup of lemons.

No improvement resulted; the dyspnœa steadily increased; the auxiliary muscles of respiration were brought into play, but the countenance did not become livid until after a fit of coughing; the chest sounded everywhere well on percussion. I at first attributed this dyspnœa to excitement, until the friends assured me she was always so. The cough was almost nothing at this period; it was readily "smothered" by the child.

On the 17th of August, after a more than usually violent fit of coughing, a swelling made its appearance in the neck just over the sternum; the depression between the origins of the sterno-cleido-mastoids disappeared, and was converted into an enormous goitre in shape and appearance; but the boundaries were more diffused and extensive than this disease usually assumes. I saw it some hours after its origin. It then appeared very prominent and diffuse; the inferior extremity stretched downwards over the first and second bones of the sternum, and terminated in an acute point; from hence the two external margins took a curvilinear direction upwards and outwards to the middle of the clavicle on each side, so that the tumour had a triangular appendage to it inferiorly; this appendix was elevated above three eighths of an inch above the surface of the surrounding skin.

Above the sterno-clavicular articulation it was a rounded prominent tumour, extending even up to the larynx, and outwards to the

margins of the sterno-mastoids on each side; it had a very transparent appearance; "it looked watery," as the relatives expressed it, but the decided crepitant feeling experienced on handling it at once declared it to be air in the cellular tissue; in fact, emphysema! Whence came this I was at a loss to conjecture. It was probable that one of the muciparous follicles of the trachea had ulcerated through all the coats of this tube, and permitted an escape of air under the fascia. The dyspnœa rapidly increased, as also did the swelling: it at length extended to the ramus of the lower jaw; the face became livid, and the extremities cold; the child gradually passed into asphyxia, and died quietly on the 19th of August, at ten a. m.

A carefully-conducted post-mortem was made on the 21st. Decomposition had not commenced.

The dissection of the neck clearly showed the air to be in the cellular tissue, beneath the deep cervical fascia, and around the trachea. The whole of the cellular tissue here was emphysematous, and it passed downwards behind the sternum into the anterior mediastinum, the cellular tissue in which was excessively distended by air. The lungs were also broken up by emphysematous dilatations; the upper lobe on the right side was most extensively disorganised by it; many of its cells were as large as currants and grapes, and all of them were larger than natural. Air was proved to pass from the root of the upper lobe of the right lung into the anterior mediastinum, behind the pleura; therefore, one of the distended emphysematous lobules at the root of this lobe must have given way, and allowed the air to escape into the cellular tissue in the manner described. The other organs of the thorax and abdomen presented no appearance worthy of remark; they were all anemic. No air existed in either of the pleuritic cavities.

This case is an interesting one—the rarity of its occurrence makes it especially worthy of note. Upon reference to Dr. Copland's 'Medical Dictionary,' I find that emphysema of the cellular tissue of the neck has already been noticed to occur, by two reporters, after hooping-cough. Not possessing the original communications, I am unable to say whether both these cases were fatal; but from the urgent dyspnœa in this particular instance, and the irremediable nature of the injury, I must presume that it is almost impossible to be otherwise than a very fatal accident. The peculiar shape of the tumour is at once indicative of the affection; I should now have no difficulty in recognising it again in a moment. It is evident to every anatomist that this peculiar shape is owing to the attachments of the cervical fascia to the various salient points about the neck, which, of course, did not permit the air to insinuate itself under the fascia in these positions. I greatly regret that auscultation was not practised upon this little patient's thorax to elucidate the cause of the dyspnœa on the 15th. Had I done so, the condition of the lung would have been detected, and the cause at once revealed. It would have been impossible, however, to have foreseen this accident; in fact, I should never have expected it, as, until the present case happened to me, I was perfectly ignorant of its existence.

Art. 13.—*Case of True Pneumonic Abscess.*

By Dr. James F. Duncan.

(*Dublin Medical Press*, July 26, 1848.)

[The rarity of true pneumonic abscess may be inferred from the fact that Laennec has met with but five or six examples, Andral with only four, Romkaud, Gendrin, and others with but one or two. As an instance, therefore, of an unfrequent pathological condition, the following case is worthy of record, independently of the judicious remarks by which the clinical history is accompanied.

A labouring man, æt. 42, was admitted into the Wicklow County Hospital in January, 1848, complaining of total inability to swallow, with urgent dyspnœa. He had got wet at a fire in the previous August, after which dysphagia came on gradually.

Under the idea that he had aneurism, Dr. Duncan submitted him to a careful auscultation, which determined him upon refuting the opinion. Dr. Duncan thus proceeds :]

Having dismissed the idea of an aneurism from my mind, it became necessary to prosecute the examination of the case further, with a view of ascertaining the true nature of the complaint under which he was labouring. The first symptom that arrested my attention was the extreme fætor of his breath: it was so offensive that it was almost impossible to stand near him, even for the purpose of making an examination: it had, in fact, quite a gangrenous character. Like many other patients similarly circumstanced, he was not conscious of it himself, but he admitted it had been noticed by others. It was not, however, constant, but seemed to be connected with his expectoration rather than with his breath. It was only when he coughed up some of the matter that this intense fætor could be observed. This is a point deserving attention, as assisting to distinguish gangrene of the lung from pneumonic abscess. Many persons confound these two affections; but they are really distinct, and the diagnosis is of great importance. Gangrene is much more common than abscess, but the latter is more amenable to treatment. When a patient is attacked with gangrene, his breath has the characteristic odour which never leaves him but with life; but in pneumonic abscess, though the breath is occasionally fetid, yet as this depends upon the expectoration, it is only when he has just spit up, that the symptom is perceptible.

The other symptoms of his case were these: complete dullness of the lower half of the right lung, which was found on measurement at the level of the mamma to be half an inch larger than the left; the dullness became greater the nearer the base of the lung that percussion was practised; there was marked bronchophony, almost amounting to œgophony, in the posterior portion of the dull part of this lung, while in the anterior, respiration was entirely suppressed. In a circumscribed spot, about three inches below the right axilla, and on a level with the right nipple, cavernous respiration, with gurgling and metallic tinkling, was detected; the cavernous respiration was extremely well marked; the other phenomena, though sufficiently distinct, were less intense; a little above this situation, pectoriloquy in a most perfect

form existed. The intercostal spaces were everywhere manifest; the voice reverberated naturally except in the dull portion; his body was greatly emaciated; his pulse 116, and very weak; he had no diarrhœa nor night sweats, and his cough, which was trifling, was not troublesome except at night.

The physical signs just enumerated naturally pointed to the existence of pleuro-pneumonia of the base of the right lung with an abscess deeply seated in the middle lobe on a level with the nipple, and about three inches below the axilla. This diagnosis thus made, and which was verified at the autopsy, was written down the next day on the patient's card—a circumstance particularly fortunate, as these happy hits are so often made or mended after the revelations of the dissecting table.

But, to return. These signs, so obvious on the first day, became less distinct subsequently, insomuch that a superficial observer listening for the first time would have some doubt as to the reality of their existence. Now, as we know that their production depends upon organic alterations in the lungs, which cannot be removed in any very short space of time, it is plain that when their existence has been once satisfactorily ascertained, we ought naturally to look for their continuing with equal distinctness afterwards. How, then, are we to explain deviation in the present instance? You must have noticed that the abscess, as revealed by dissection, was almost entirely filled by that offensive matter of which I have already spoken; and that it was of a peculiarly tenacious character, so that it did not possess the fluidity of ordinary pus. The consequence of this was, that it could easily choke up the air-tubes leading to the interior, and thus prevent the development of those sounds—pectoriloquy, gurgling, and cavernous respiration—by which the existence of the abscess was diagnosed at the first; and that this was the true explanation of the difficulty was proved by the mere effort of coughing at any time restoring these signs to their original distinctness.

[Having arrived at the conclusion that an abscess existed, the further question arose as to its nature, whether simple or tubercular. This question Dr. Duncan next discusses:]

Let us now suppose that, from a careful examination of the physical condition of the chest, we have arrived at the conclusion that an abscess existed at the spot already indicated, how are we warranted in pronouncing that abscess to be pneumonic and not tubercular? I need not tell you that tubercular cavities are as common as the others are rare, and that the *prima facie* probability is strongly in favour of the phthisical nature of the disease. The situation, indeed, supposing it to be correctly indicated, is not that of an ordinary vomica; but irregularities in this respect are frequent enough to make us pause before resting implicitly upon that point alone.

Let us look a little more closely at the general symptoms to ascertain what light they are likely to throw upon this question, for as the case stands, the physical signs *per se* are incapable of determining it.

Several of these,—the emaciation, the rapid weak pulse, the duration of the complaint, and the chronic affection of the larynx, all countenanced the idea of its being really tubercular; while, on the other

hand, several circumstances connected with the case evidently militated against it. If the disease were really phthisis, it was reasonable to infer, from the period that had elapsed from its supposed commencement, as well as from the fact of the existence of a cavity, that it must have been in the third or advanced stage of the complaint, whereas he had neither the perspirations nor the diarrhœa that are the usual accompaniments of that stage. So far the reverse, his skin was hard, and dry, and scaly, indicating a suppression of the natural secretion of the part, and his bowels did not act without the assistance of medicine. I do not lay much stress upon the reputed cause of the man's illness, because it is always difficult to obtain really correct information upon matters of this kind; yet assuming his statement to be well founded, it was a circumstance much more likely to produce an inflammatory affection of the chest than to develop tubercles in a man previously healthy, resident in the country, and arrived at the forty-second year of his age.

I have already mentioned the extreme dyspnœa under which he was suffering, indicated by the rapidity of his respiration, but I have not mentioned that this was attended with marked lividity of the lips, a point deserving consideration from the rarity of its occurrence in consumption. Lividity of the lips, as it commonly appears in chronic bronchitis and emphysema, is the result of the want of the natural proportion between the quantity of blood circulating in the vessels, and the capacity for aërating it possessed by the lungs. Disturbance of the proper relation between these two never arises from mere hyperæmia, because, however great the quantity of blood, the lungs in the healthy state are adequate to arterialize the whole sufficiently. The case, however, is different when the natural structure of the lungs is altered, because then their efficiency as a depurator of the blood is destroyed, and the carbonic element accumulates in the system. Still it is a remarkable fact that in consumption, notwithstanding the progressive disorganization that takes place in the lungs, often leaving a very small portion indeed in a state to fulfil its function, neither lividity of the lips, nor extreme rapidity of respiration, are by any means common symptoms; the reason of which is this, that a diminution in the quantity of the blood takes place at the same time with the destructive process in the chest, and thus the essential ratio of the one to the other continues to be preserved. Regarded in this light, the exhausting perspirations and the protracted diarrhœa are a sort of safety-valve to relieve the system of its superfluous fluids, and to make the descent down the hill of life less distressing to the patient.

Fætor of the breath is occasionally met with in consumption, though it must be admitted to be comparatively rare. I believe that, when it does occur, it is due to sloughing of the walls and cellular membrane of the vomicæ, which become detached, and putrefy. The extreme degree, however, in which it existed in Doran's case, was altogether incompatible with such a supposition; and in point of fact it was this symptom that first led me to suspect the nature of the malady, and to search for its proper seat.

But probably the most important argument of all was to be found in the enlargement of the lower part of the right lung, coupled with

the consideration that the solidification was confined to that part. Tuberculization, except, perhaps, in some rare cases of acute phthisis, never leads to an augmentation in the volume of the organ. The chronic nature of the complaint in the present instance excludes these few exceptional cases, and hence we were justified in inferring that we had not solidification from tubercles to deal with. It is true that anteriorly we had reason to believe fluid existed at the base of the lung, which might account for the enlargement, but even this will not get rid of the difficulty, in consequence of the complete absence of tubercles in the upper lobe. Pleuritic attacks in phthisis (with the solitary exception of that depending upon rupture) are invariably lymphy or dry, the reason of which is obvious; they are designed in the economy of nature to act a conservative part, and to guard against internal laceration. Effusion, however, does occur occasionally, but always as the consequence of a sudden giving way of the pleura in some part where this adhesive process has not taken place; the contents of the vomica escape into the thorax, the side is enlarged, the lung compressed, and a fistulous opening, with its characteristic signs, is established. In that case the tubercles occupy the upper portion of the chest, while the lower remains free. Were the lower lobes solidified, the effusion would be restrained; but what is more important, the mechanical condition of the lung would be such as to prevent the injury occurring. The very supposition, then, of the lower part of the lung being solidified precludes the possibility of such an occurrence.

[The differential diagnosis as respects gangrene of the lung is disposed of in the following words:]

The diagnosis from gangrene remains to be discussed. I have already said that, rare as gangrene of the lungs is, it is still more frequently met with than true pulmonary abscess. It occurs sometimes in connexion with pneumonia, but on other occasions it appears to result from a septic condition of the fluids, the consequence of want and misery, as in the very poor; of neglect, or more probably of depraved habits, as in epileptics and lunatics; of extreme intemperance; and of the introduction of certain poisons into the system, either by inhalation, as in nightmen, or by the bite of insects, as in a case recorded by Carswell. Under all circumstances it is an acute disease. If you look into Simon's 'Pathological Anatomy,' you will find that he mentions there are but two or three instances known of its occurring in chronic inflammation of the lungs. When it succeeds to acute pneumonia, it appears to result from the intensity of the inflammation occurring in an unhealthy state of the constitution. In this respect our case differed widely from the common features of gangrene. But, further, its occurrence is always attended by a marked collapse of the vital forces, indicated by exhaustion of strength, feebleness, and irregularity of the pulse, change of the features, coldness of the extremities, and tendency to faint. In the present case we had none of these symptoms. He was able to walk about without assistance; his pulse, though frequent and small, was regular; his countenance had a natural appearance, and, so far as he was able to swallow, his appetite was good.

I need not tell you that the prognosis in this case was from the first of the very gravest character. A man breathing from forty to forty-four times in the minute, with a pulse varying from 116 to 120, and extremely small, who had been six months ill, and who was scarcely able to swallow anything, was not likely to be materially benefited by anything we could do for his relief. All that could be done was to support his strength by wine, porter, strong animal broths, and whatever other nourishment he could take. External friction, with mercurial ointment, seemed the only remedy certainly at our disposal: this was accordingly resorted to; but the attempt to administer hydriodate of potash dissolved in decoction of bark was made, and succeeded better than I anticipated. For two days he appeared to hold his ground, and even to improve slightly: he was able to swallow better; his respiration became less frequent by three or four inspirations in the minute, and his aspect improved. On the third day, however, an evident change for the worse had taken place; the pulse rose to 132, and became much weaker while the power of deglutition failed. The next day he was dead. The dissection revealed a single cavity, capable of holding two or three large walnuts, in the middle lobe of the right lung, deeply seated, and partially filled with matter, having an odour exactly resembling gangrene, or the most abominable fæces. Anteriorly, the side of the lung next the mediastinum was compressed and separated from the ribs by a quantity of citron-coloured serum (about a pint and a half), and posteriorly the two lower lobes were of a grayish-white colour, hard to the feel, and perfectly solid. Semi-organized lymph, evidently of recent formation, occupied the lateral and posterior surface of the pleura, while the anterior was free from it. It is hardly necessary for me to say that these appearances exactly coincided with the physical signs during life.

SECT. IV.—DISEASES OF THE CHYLOPOIETIC SYSTEM.

ART. 14.—*On Ulcerative and Gangrenous Stomatitis.* By Dr. WEST.

(*Medical Gazette*, June 2d.)

[We continue to extract from the valuable Lectures on the Diseases of Childhood, referred to in former volumes.]

Dr. West remarks that *ulcerative* stomatitis attacks the gums and sometimes destroys them extensively; the process is, however, one of ulceration, not of mortification, which distinguishes the disease from *cancrum oris* or *gangrenous* stomatitis.

Ulcerative stomatitis, or noma, attacks children who are not robust, and such as have been ill-fed and lived in damp, ill-ventilated situations. The ulceration sometimes makes considerable progress before its existence is suspected, and the attention is only excited by the profuse flow of saliva and fetid smell of the breath. On opening the mouth, the gums are seen to be red, spongy, and swollen, and their

edge is covered by a dirty pultaceous deposit, on removing which their surface is exposed, raw and bleeding. The gums of the incisor teeth are usually first affected, those of the lower jaw more frequently than the upper. Sometimes aphthous ulcers, like those of follicular stomatitis, are seen to coexist; but this is the exception. On those parts of the lips which are in contact with the ulcerated gums irregular ulcerations form, which have a similar appearance; sometimes deposits of false membrane take place on other parts of the inside of the mouth, the surface beneath being red and spongy, and bleeding, though not distinctly ulcerated. If the disease be severe and long-continued, the tongue assumes a sodden appearance, and is indented by the teeth, and the cheek, on one or other side is somewhat swollen, while the saliva, though rather less abundantly secreted than at the commencement of the affection, continues horribly fetid, and is often streaked with blood, the gums themselves bleeding on the slightest touch. But even if left alone, the affection usually subsides in the course of time, though it may continue almost stationary for days or weeks together, and this notwithstanding that the general health is tolerably good. Dr. West thinks that it would be too much to say that this unhealthy ulceration never degenerates into gangrene; but though a very large number of cases of ulcerative stomatitis have come under his notice, he has seen only one instance in which it was succeeded by true gangrene of the mouth. When recovery has commenced, the disease ceases to spread; the drivelling of fetid saliva diminishes; the white pultaceous deposit on the gums, or on the ulcerations of the cheek or lips, becomes less abundant; the ulcers themselves grow less; and, finally, the gums become firm, and their edges of a bright red, though still for a long time showing a disposition to become once more the seat of the ulcerative process, and continuing for a still longer time to cover the teeth but very imperfectly.

Various internal remedies and local applications have been at different times recommended for *the cure of this affection.* Tonics have been much employed, and the supposed analogy between this state of the gums and that which exists in scurvy has led practitioners to give the preference to remedies supposed to be possessed of anti-scorbutic properties. Lotions of alum, or the burnt alum in substance, or the chloride of lime in powder, have all been used locally with more or less benefit. It was Dr. West's custom, also, to prescribe these remedies in cases of ulcerative stomatitis; but since the chlorate of potash was introduced to the notice of the profession by Dr. Hunt, he relies upon it almost exclusively. It appears, indeed, in his opinion, almost to deserve the name of a specific in this affection; for a marked improvement seldom fails to be observed in the patient's condition after it has been administered for two or three days, and in a week or ten days the cure is generally complete. Three grains every four hours, dissolved in water and sweetened, is a sufficient dose for a child three years old, and five grains every four hours is the largest quantity that he has administered to a child of eight or nine. If the bowels be constipated, a purgative should be previously administered; but there seems to be no form nor any stage of the affection in which the chlorate of potash is not useful. The diet should be light, but nutritious, and quinine or

other tonics are sometimes serviceable if the child's health should continue feeble after the local malady has been cured.

Ulcerative stomatitis is an affection of such frequent occurrence, that many instances of it come under Dr. West's notice every year, especially during the damp autumnal months; while it is attended with so little danger, that the only case in which he has known it prove fatal was one in which gangrene of the mouth supervened upon it. *Gangrenous stomatitis*, on the other hand, is a disease so rare, that he has only five times had the opportunity of witnessing it; but so fatal, that in four out of these five cases the patients died. The larger experience of other observers shows an equally unfavorable result, since twenty out of twenty-one cases that came under the notice of MM. Rilliet and Barthez had a fatal termination. The formidable nature of the disease requires that we study it more closely than, considering the rarity of its occurrence, would otherwise be necessary; and it is the more important to do so, in order that we may avoid the not very uncommon error which confounds this dangerous affection with that comparatively trifling ailment, ulcerative stomatitis.

Gangrene of the mouth seldom comes on, except in children whose health has been already much impaired by previous disease, and especially by those diseases which are connected with important changes in the circulating fluid. Of 29 cases which MM. Rilliet and Barthez either observed themselves, or of which they found mention in the writings of other physicians, only one appeared to be an instance of idiopathic gangrene of the mouth, while in 12 cases the disease followed an attack of measles. Of the 5 cases which Dr. West has observed, and 3 of which he examined after death, 2 succeeded to typhoid fever, 2 to measles, and 1 supervened in a tuberculous child who had been affected for many weeks with ulcerative stomatitis in a severe form. Though not confined to any one period of childhood, gangrene of the mouth is more frequent between the ages of 2 and 5 than either earlier or later. Of the 29 cases mentioned by MM. Rilliet and Barthez, 19 occurred between 2 and 5; 10 between 6 and 12. Of the 5 cases that came under Dr. West's own observation, 1 was in a child aged $2\frac{1}{3}$ years, 1 in a child aged 3, 1 between 4 and 5, 1 at $6\frac{1}{4}$, and 1 at 8 years of age.

Although all the tissues of the cheek become involved in the course of this affection, yet difference of opinion has existed with reference to the part in which it commences; some observers conceiving that it generally begins in the substance of the cheek, while others regard the mucous membrane as being the part which is invariably the first attacked. So far as his own observation enables Dr. West to judge, he is disposed to regard this latter view, which is that of MM. Rilliet and Barthez, and of M. Baron, as correct.

The early stages of the affection are attended by scarcely any suffering, owing to which, as well as to the circumstance that the children in whom it supervenes are almost always labouring under some other disease, or in the course of convalescence from it, it is probably due that the malady is often not discovered until after it has made considerable progress. There may for a day or two have been an unusual fetor of the breath, and a profuse secretion of offensive saliva, but the

appearance of swelling of the cheek is frequently the first symptom that leads to a careful examination of the state of the mouth. The characters of the swelling of the cheek are almost pathognomonic of the gangrene of the mouth. It is not a mere puffiness of the integument, unaccompanied with any change of its colour, such as is sometimes observed in ulcerative stomatitis, but the cheek is tense, and red, and shining; it looks as if its surface had been besmeared with oil, and in the centre of the swollen part there is generally a spot of a brighter red than that around. The cheek feels hard, and is often so unyielding that the mouth cannot be opened wide enough to get a good view of its interior. The disease is almost always limited to one side, and generally to one cheek. Sometimes, however, it extends to the lower lip, and occasionally it begins in that situation. The upper lip is now and then reached by the progress of the disease, but is never its primary seat. Whatever be the situation of the external swelling, there will generally be found within the mouth, at a point corresponding to the bright red central spot, a deep excavated ulcer, with irregular jagged edges, and a surface covered by a dark brown shreddy slough. The gums opposite to the ulcer are of a dark colour, covered with the putrilage from its surface, and in part destroyed, leaving the teeth loose and the alveolæ denuded. Sometimes, especially if the disease be further advanced, no single spot of ulceration is recognisable, but the whole inside of the cheek is occupied by a dirty putrilage, in the midst of which there are large shreds of dead mucous membrane hanging down. As the disease extends within the cheek a similar process of destruction goes on upon the gum, and the loosened teeth drop out one by one. The saliva continues to be secreted properly, but shows, by the changes which take place in its characters, the progress of the disease. At first, though remarkable for its fetor, it was otherwise unaltered, but now it is no longer a transparent fluid, but receives from the putrefying tissues over which it passes, a dirty, greenish, or brownish colour, and at the same time acquires a still more repulsive odour.

While the gangrene is thus going on inside the mouth, changes no less remarkable are taking place on the exterior of the face. The redness and swelling of the cheek extend, and the deep red central spot grows larger. A black point appears in its midst; at first it is but a speck, but it increases rapidly, still retaining a circular form; it attains the bigness of a sixpence, a shilling, a half-crown, or even a larger size. A ring of intense redness now encircles it, the gangrene ceases to extend, and the slough begins to separate. Death often takes place before the detachment of the eschar is complete, and it is fortunate when it does so, for sloughing usually commences in the parts left behind. The interior of the mouth is now exposed, its mucous membrane and the substance of the cheek hang down in shreds from amidst a blackening mass, and form one of the most loathsome spectacles that can be conceived; while the horrible stench which the mortified parts spread around, makes the task of watching the poor child as repulsive as it is distressing.

Happily it is not often that the acute suffering of the child occurs to heighten the distress of the sad scene. Usually it has but little

pain from the very first, but is generally more drowsy than before, though sometimes the nights are restless; and in those cases in which gangrene of the mouth supervened in the course of typhoid fever, the delirium which existed before, continued unmodified. The pulse grows feebler as the disease advances, but gleams of cheerfulness may sometimes be perceived, even long after the appearance of the black eschar on the cheek has shown the case to be all but hopeless, and the desire for food often continues unabated till within a few hours of the child's death, which generally takes place quietly, though sometimes it is preceded by convulsions.

Since gangrene of the mouth occurs in the course of a great variety of diseases, the only morbid appearances characteristic of it are those which result from the local mischief. On two occasions Dr. West dissected the gangrenous parts very carefully, and the alterations which presented themselves to his notice were precisely the same as have been described by MM. Rilliet and Barthez. The absorbent glands, both superficial and deep seated, on the affected side are enlarged, and the cellular tissue of the cheek is infiltrated with serum, which is more abundant the nearer one approaches to the slough. In the substance of the eschar, the distinction of parts is no longer easy, but with care the vessels and nerves may still be traced; and the reason why fatal hemorrhage so seldom cuts short the life of patients suffering from this affection, is at once explained by the clot which plugs up the vessels for some distance on either side of the gangrenous mass, On one occasion he found the root of the tongue, the tonsils, pharynx, both surfaces of the epiglottis, and about an inch of the œsophagus, completely coated with a moderately firm, yellow, false membrane, about a line in thickness, easily detached, and leaving the subjacent mucous membrane only a little redder than natural. A few patches of a similar deposit existed in the larynx, but not continuous with that in the pharynx. In this case, great difficulty of deglutition had existed for three days before the death of the child. The association of diphtheritis with gangrene of the mouth is, however, an accidental complication, and one of not very frequent occurrence.

The arrest of the sloughing is the one point to which in the *treatment* of this affection the attention of all practitioners has been directed. The small amount of success which has attended their efforts, is partly attributable to the circumstance that the affection has frequently been overlooked, until it has already made considerable progress; in part also to the fact that when recognised, the local remedies employed in order to check the gangrene have either been too mild, or have been applied with too timorous a hand. Unfortunately, too, there is considerable difficulty in applying any caustic effectually to the interior of the mouth,—for not only does the tense and swollen condition of the cheek prevent our obtaining easy access to the gangrenous parts, but the child naturally resists an operation which cannot but occasion it most severe pain. Ineffectual cauterization, however, is useless, or worse than useless; and though every endeavour should be made to prevent the needless destruction of healthy parts, yet of the two evils, that of doing too much is unquestionably less than that of doing too little. It is of importance,

moreover, not only that the cauterization should be done effectually, but also that it should be practised early. M. Baron, indeed, speaks of incising the slough in the cheek, and then applying the actual cautery to the part; but I am not aware of any instance in which this suggestion has been acted on with a good result. When once the mortification has extended through the substance of the cheek, the chances of arresting its progress must be very few. As the sloughing advances from within outwards, it is to the interior of the mouth that our remedies must be applied, and since the advance of the disease is too rapid to allow of our trying mild means at first, and afterwards resorting, if necessary, to such as are more powerful, we must employ an agent sufficiently energetic at once to arrest its progress. Various caustics have been recommended for this purpose, but none appear to be so well fitted to accomplish it as the strong hydrochloric or nitric acid. Dr. West is accustomed to employ the latter, applying it by means of a bit of sponge, or of soft lint or tow, fastened to a quill, while he endeavours, by means of a spoon or spatula, to guard the tongue, and other healthy parts, as far as possible, from the action of the acid. In the only case that he saw recover, the arrest of the disease appeared to be entirely owing to this agent, and though the alveolar processes of the left side of the lower jaw, from the first molar tooth backwards, died, and exfoliated apparently from having been destroyed by the acid, yet it must be owned that life was cheaply saved even at that cost. Some increase of the swelling of the cheek almost invariably follows the application of this agent—a circumstance which may at first occasion unfounded apprehension lest the disease be worse. Twelve hours, however, must not be allowed to elapse, without the mouth being carefully examined, in order to ascertain whether the disease has really been checked, or whether there is any appearance of mortification in the parts beyond the yellow eschar left by the first application of the acid. The cauterization may now be repeated, if it appears necessary, and even though the disease had seemed completely checked; yet reliance must not be placed on the improvement continuing, but the mouth must be examined every twelve hours, for fear the mortification should spread unobserved. During the whole progress of the case the mouth must be syringed frequently with warm water, or with camomile tea mixed with a small quantity of the solution of chloride of lime, in order to free it from the putrid matters that collect within it, and to diminish as much as possible their offensive odour. Should the case go on well, the frequent repetition of the strong acid will be unnecessary, but the surface may still require its application in a diluted form, or it may suffice to syringe the mouth frequently with chloride of lime lotion, or to apply the chloride in powder once or twice a day, according to the suggestion of MM. Rilliet and Barthez. In the last two cases of this affection that came under the author's notice, he likewise employed the chlorate of potash internally, as recommended by Dr. Hunt, but it did not appear to exert any influence over it; and valuable though the remedy is in ulcerative stomatitis, it would, he thinks, be merely trifling with your patient's chances of recovery to trust to it in true gangrene of the mouth.

During the whole course of treatment, another indication has to be fulfilled, namely, to support the patient's strength by nutritious diet, and by the employment of wine and other stimulants, and the administration of quinine, or of the extract of tincture of bark, or whatever form of tonic might seem best suited to the peculiarities of the case.

In conclusion, during the whole progress of the case, the prognosis must be regulated by the state of the local disease, rather than by the urgency of the general symptoms. So long as the sloughing is unchecked, the affection is tending rapidly to a fatal issue, and this even though the pulse be not very feeble, though the appetite be good, and the child still retain some show of cheerfulness.

[With reference to the influence of mercury in producing the disease, Dr. West observes:]

It might seem to you to be an omission on my part if I left the subject of inflammation and gangrene of the mouth without some notice of the supposed influence of mercury in its production. There can be no doubt but that this preparation, even when given in small doses, has in a few instances produced severe ptyalism, inflammation of the mouth, loss of the teeth, and necrosis, more or less extensive, of the lower jaw. In some cases, too, the inflammation has terminated in gangrene of the cheek, which has presented many of the characters that we have just been noticing; and under such circumstances inquests have sometimes been held, and blame has been attached to the medical attendant for alleged want of caution in the administration of so powerful an agent as mercury. Now although mercury should never be given without necessity, nor its administration continued without watching its effects most carefully, yet I cannot but regard the supervention of gangrene of the mouth during its use as merely an accidental coincidence, or else as the result of some peculiar idiosyncrasy of the patient, such as has been observed in the adult as well as in the child. During the past nine years more than 15,000 children of all ages have come under my care, and I have administered mercury to any of them who seemed to require it, but have hardly ever seen salivation follow its employment before the completion of the first dentition, and have never observed that medicine, at any age, produce an affection of the mouth sufficiently serious to occasion me a moment's anxiety.

ART. 15.—*Treatment of Ptyalism by a concentrated Solution of Nitrate of Silver.*—M. Bouchacourt had a patient who became profusely salivated by accident. A borax gargle, alum gargle, sinapisms, &c., had been employed, without benefit, for six-and-thirty hours, when the idea occurred to treat the mercurial inflammation by a solution of nitrate of silver, which was accordingly applied to the base of the tongue, gums, &c., with a camel-hair brush. The caustic caused some burning pain, but after the lapse of a few minutes this subsided. The application was renewed three or four times, when the stomatitis was found to be perfectly cured.

Journ. de Méd. de Lyon.

Art. 16.—*Extraordinary Case of Biliary Concretions.* By Edward Wilson Duffin, m.r.c.s.—The patient, a man sixty-five years of age, had, on several occasions during the last three years, consulted the author for symptoms that were presumed to proceed from deep-seated subacute inflammation of the liver. He was also subject to dyspepsia. On the night of the 25th of January last he was seized with vomiting and hiccough, which continued, with only trifling intermissions, for three days. On the third day he vomited about three pints of a fluid like coffee-grounds. Uneasiness in the abdomen, a little to the left of the umbilicus, had annoyed him occasionally for some time, and there was now tenderness in the same situation. There was no jaundice, but he gradually became much emaciated, and at length, without new symptoms, died on the 9th of March. On examination after death, two folds of intestine, to the left of the umbilicus, were found adherent to each other by recently effused lymph, and in an angular pouch-like dilatation of this portion of intestine (the jejunum) a large wedge-shaped concretion was found. The gall-bladder, in its entire length, on its under surface, was found to have been destroyed by ulceration, the edges of the remaining portion being continuous with the edges of a large perforating ulcer in the anterior walls of the duodenum. The duodenum presented two pouches, of one of which the anterior part of the gall-bladder formed the apex. Lodged in these pouches were three large biliary concretions. The length of the four concretions, all of which had bevelled surfaces, was, when they were fitted together, six inches and a half. Their weight was two ounces, five drachms, nineteen grains. The author referred to two similar cases, one related by Cruveilhier, the other by Mr. Blagden, of Petworth, in the 'Medico-Chirurgical Transactions,' vol. iv. In neither of these cases was the mass of concretions so large as in the present instance.

Reported in Medical Times, &c. June 3d.

Art. 17.—*On Gastrodynia and its Treatment.* By Dr. Dick.

(*Lancet*, June 10, 1848.)

Gastrodynia.—Under the head Cardialgia we have remarked, that while that affection more particularly signifies pain and heat of stomach, accompanied with heartburn or pyrosis, gastrodynia and gastralgia are but synonymes of a topical, that is, of a gastric neuralgia, in which derangement of the secretions, as indicated by a furred tongue, &c., or inflammatory action, as shown by redness of tongue, by thirst, tenderness at the epigastrium, &c., are not necessarily or even usually present. On referring to my notice of cardialgia I observe that, owing probably to an omission of the printer, remarks on treatment are left out. I shall accordingly introduce a brief reference to it under the present kindred head.

It is needless to remark that, etymologically, there is a distinction between cardialgia, gastrodynia, and gastralgia; that the first means strictly *heart*-pain; the last two stomach-pain. But the fact is that all three are not rarely applied to cases of uneasiness at or near the epicardiac region, in which the stomach itself is either not affected, or

affected only secondarily and subordinately. There can be little doubt that in not a few cases of epigastric uneasiness the seat of pain is not in the stomach, but probably in the splanchnic nerve, while even yet in the thorax, or where immediately after, having passed the crura of the diaphragm, it forms the semilunar ganglion: still more frequently there is reason to believe that the solar plexus, or the left hepatic plexus, is the seat of pain supposed stomachic. On other occasions the upper part of the pancreas, or the intestinal end of the duodenum, are the probable seats.

In other cases, in which the pain is unquestionably in the stomach, and owing to the presence there of irritating secretions, it may yet happen, and happens, indeed, not rarely, that these secretions are not of stomachic origin, but regurgitations from the duodenum, liver, or pancreas—nay, it is not unlikely, or at least, impossible, from the first or upper part of the jejunum. Andral mentions cases of a father and son, with severe cardialgia, accompanied with vomiting, caused by fatal disease of the pancreas.

Such being the various possible origins of cardialgia and gastrodynia, it is evident that the treatment must be correspondingly varied. If there is heartburn, with sour eructations, we try at first a simple antacid, as ten or fifteen grains of carbonate of potass, in, if you will, two or three ounces of some aromatic water. If this is not sufficient, and an alterative alkali is indicated, the carbonate of magnesia may be tried. If the tongue is suburral, and its edges red, the breath heavy, hot, and fetid, the bowels irregular, the urine turbid and high-coloured, and the stomachic uneasiness rather dull than acute, but constant, it is presumed that the gastric mucous surface, probably also the duodenal and jejunal mucous membrane, is in the same condition as that of the tongue,—sub-inflammatorily congested. In this case, if the patient is young and plethoric, the treatment is simple. The compound infusion of senna, with the sulphates of magnesia or potash, until the tongue cleans, and the stomach-pain vanishes, are all that is necessary.

The same symptoms may, however, occur in arthritic and rheumatic subjects and persons considerably past middle life. Here a more cautious treatment is required. The neutral salts are to be avoided. Extract of rhubarb and blue pill must gently correct the secretions and promote excretion, and the infusion of senna must be combined with that of rhubarb and with tincture of cardamoms, or the compound spirit of horseradish. To the extract of rhubarb and blue pill I have often seen advantage from the addition of extract of colchicum, in such proportions of two or three grains of rhubarb plus a grain and a half of blue pill and extract of colchicum respectively.

If the cardialgia arises from the ingurgitation of bile, as evinced by extreme nausea, bitterness of taste in the mouth, and bilious retchings, we ought to commence with the induction of vomiting, and thereafter give draughts, composed of decoction or infusion of taraxacum, with sulphate of magnesia. This last measure is, however, only to be resorted to if the stools are pale and inefficient, and the hepatic region full and tender; for in this case we must presume that the hepatic veins are congested, and require to be stimulated to evacuate

their contents. But if, along with bilious vomiting, there are bilious stools, the treatment, after the emetic, should consist of little else than diluents, and should be conducted on the principles elsewhere stated. If the bile be freely and spontaneously discharging itself, there is no use in exasperating the obviously already excited liver by purgatives.

If the cardialgia is flatulent, draughts or a mixture, composed of four or six drachms of the compound tincture of ammonia, and of the tincture of assafœtida, respectively, with six or eight ounces of the compound infusion of senna, will dispel the cause.

The cardialgia of pregnancy has no cure but parturition. That which is owing to interrupted menses or suppressed hæmorrhoids, long established, must be treated by leeches applied to the anus or groins, by hot pediluvia, and by sufficient but prudent purging. The cardialgia of old subjects, if plainly traceable to suppressed hæmorrhoids, must be treated promptly. Aloes must be given in the purgative, and stimulant suppositories inserted.

Perhaps the last two kinds of cardialgia ought more properly to be considered as cases of gastrodynia or gastralgia, to a brief notice of which we now proceed.

We have stated (arbitrarily it may be, yet conveniently for practice) the distinction between cardialgia on the one hand, and gastrodynia or gastralgia on the other, to consist in the former being attended with more or less inflammatory irritation of the mucous membrane and deranged secretions; the latter to consist simply of a neuralgia, in which the tongue, secretions, and excretions need not be, and very frequently are not, deranged. In short, we suppose gastrodynia to be a local idiopathic neuralgia, the only symptom of which is pain, and for which there is no appreciable or very probable cause.

In such cases the treatment must depend on the temperament, sex, and age of the patient. For example, in exsanguine subjects we would give bark and iron; or iron and some aromatic powder, without sedatives or narcotics: in plethoric subjects, especially if young, we would order restricted diet and drink; seidlitz powders largely diluted; or, if accessible, seltzer or Vichy water. In cases neither decidedly exsanguine or the reverse, we would order sedatives or narcotics, now with, and now without, the addition of vegetable or mineral tonics. Thus one case might require the various preparations of opium, or hyoscyamus, or conium, or aconite alone, or belladonna, stramonium, cannabis indica, or hydrocyanic acid; another would require one or other of these combined, it might be, with quinine or chiretta; a third might require the narcotics or sedatives in conjunction with metallic tonics, as nitrate or oxide of silver; sulphate or carbonate of iron; sulphate or oxide of zinc; sulphate or ammonio-sulphate of copper; the trisnitrate of bismuth, or the cyanuret of gold.

When the arthritic diathesis is suspected, the cautious administration of colchicum water, blue pill, and colocynth will often succeed.

ART. 18.—*On the comparative Efficacy of certain Medicines in Dysentery, and other Intestinal Fluxes of Hot Climates.* By Dr. PAPILLAUD, Brazil.

(*Charleston Medical Journal*, July 1848.)

The treatment of dysentery has varied in different epidemics, and inflammation, once considered a cause, is only one form, alteration of secretion another; in the most decidedly inflammatory form, the purely antiphlogistic treatment is seldom sufficient, and often useless. In diarrhœa the indication for sanguine emission is still less frequent—and even if it did exist, the physician is never called in, until the time for them has passed by. In Dr. Papillaud's private practice in France and in the hospitals of Paris, laudanum and starch injections, diet, and the extract of rhatany were usually sufficient, but he found since he practised in South America, that the former were insufficient, and that astringents usually aggravated the disease. In the province in which he lived, intestinal fluxes were very common, dysentery endemic and often epidemic towards the end of the summer. He experimented with castor oil, ipecacuanha, calomel, sulphate of soda; of the vegetable astringents, he tried rhatany and simouraba; of the mineral astringents, lime, acetate of lead, alum, and nitrate of silver; of narcotics, extract of opium and sulphate of morphia; from the results of these experiments, he determined to abide by sulphate of soda and opium, the effects of the other medicines being variable and uncertain. Castor oil does not sufficiently modify the intestinal secretion. Ipecacuanha is used not as an emetic, but as an antidysenteric. Introduced by the rectum, and causing neither vomiting nor purging, it is just as efficacious as when introduced into the stomach. Dr. Papillaud thinks its virtues have been overrated. The preparation and dose are not a matter of indifference. He prefers the infusion of the root, seven to thirty grains to four ounces of water, a table-spoonful every hour, as less provocative of vomiting than the powder. Calomel he rejects as uncertain, sometimes purging, sometimes being inert. The English practice of calomel and castor oil is very unsuccessful. The combination with ipecacuanha, in equal proportions in pills, is more efficacious. Sulphate of soda, he thinks, deserves the praise it received from Bretonneau and Trousseau, acting energetically and most rapidly. One or two drachms dissolved in a small quantity of vehicle, and given in divided doses, usually arrest a dysentery in twelve, twenty-four, or forty-eight hours at the longest. Any acute dysentery which is not suppressed in this time by it, calls for the closer attention of the physician, either as presenting complications, or being of extreme gravity. No state of the pulse or tongue, counter-indicate its use in small, moderate, or large doses. In twelve or twenty-four hours the bloody stools are replaced by natural ones, the number is diminished to three or four, and the tenesmus disappears. In other intestinal fluxes it is equally efficacious. In only one very severe, advanced case, it increased the diarrhœa, in three, it was without effect. Rhatany and simouraba deceived his expectations. In the greater number of cases an amendment took place after the first twenty-four hours, but disappeared the next day.

Mineral astringents he condemns altogether. They caused violent

pain in the stomach and bowels, increased the fever, and were of no benefit. A syrup of lime was only successful in some chronic diarrhœas without general symptoms.

Opium he considers equal to sulphate of soda, and together they formed one of the most efficacious combinations. He preferred the extract of opium, one grain in three to four ounces of vehicle, given in divided doses, and increased by a grain each day, if necessary; if the disease resist four grains, one grain of the sulphate of morphia was substituted, and progressively increased in the same ratio.

The sulphate of soda and opium were united, both because separately they were so efficacious, and further, because the sulphate of soda, not acting as a purgative, but as a general and local modifier, the action was prolonged by its union with opium, which prevented or retarded its expulsion by the action of the intestine.

Two thirds of the patients treated by sulphate of soda and opium were cured in twenty-four hours. The maximum duration of treatment was five days, the minimum twelve hours, the average two days. Opium alone gave fewer rapid cures, but the maximum and mean remained the same. Ipecacuanha alone or with calomel gave an average of five days, and a maximum of eight. The deaths were as one in ten; with the former method, as one in twenty. With astringents the treatment was inefficacious in half the cases—one fourth died; the duration of the treatment was from five to thirty days. General bleeding was indicated once in every twenty-five cases—local once in every fifteen.

These observations were collected in a province of Brazil, in twenty-nine degrees south latitude, therefore in an extra-tropical, warm region, and if we compare the results there with what occurs in France, we may conclude that the medical power of astringents in this class of diseases decreases in direct proportion to their acuteness and severity, and also in direct proportion to the elevation of temperature of the regions where they prevail.

The summary of his remarks is contained in the following conclusions:

1. Opium and sulphate of soda are the remedies, *par excellence*, in the great majority of intestinal fluxes, acute or chronic, sporadic or epidemic.

2. Either one of these, or both combined, suppress dysentery, without any danger.

3. Ipecacuanha, so much used in these diseases, is not a reliable remedy. When it did cure, it was owing neither to an emetic nor purgative property; it was most efficacious when tolerated; its introduction by enema was useful.

4. Calomel alone was more faithless still; added to ipecacuanha it promoted its toleration and regulated its action.

5. Vegetable astringents were seldom useful, and often hurtful. In the few cases where they are indicated they should be combined with opiates.

6. Mineral astringents were still less valuable, and more injurious than vegetable astringents.

7. The indications for local bleeding were very rare; that for general bleeding occurred only as an exception.

SECT. V.—DISEASES OF THE GENITO-URINARY SYSTEM.

Art. 19.—*Pathology and Diagnosis of Bright's Disease.* By Dr. James F. Duncan.

(*Dublin Medical Press*, June 28th.)

[A clinical lecture on this subject concludes with the following epitome of our present knowledge of the pathology of "Morbus Brightii :"]

To explain more clearly the recent discoveries upon this subject, I may mention that it has been satisfactorily proved by Dr Johnson to be really a fatty degeneration of the kidney, constitutional in its origin, altogether unconnected with inflammatory action, and analogous to fatty degeneration of the liver, but from circumstances hereafter to be explained, infinitely more dangerous in its effects upon the economy.

The three great excretory glands of the human body are, the lungs, the liver, and the kidneys. Each of these has, for its peculiar office, the elimination of an essential element from the organism. Thus : the lungs remove carbon ; the liver, hydrogen ; and the kidneys, nitrogen. Not that they eliminate these singly or exclusively ; various combinations of these elements are formed, but all for the purpose of rendering their removal more easy by the channel that nature has provided for the purpose. Thus, the carbon of the lungs is combined with oxygen, to give it the gaseous form, whereby it is readily carried off during respiration ; the hydrogen of the liver is united with carbon, to form the various fatty matters that analysis shows us to exist in the choleic acid and cholesterine of the bile ; and the nitrogen of the kidneys is united with hydrogen and carbon to form urea and ammonia. It is true that a quantity of nitrogen has been proved to be exhaled at the lungs, and a quantity of fatty matter is carried off at the kidneys, even in health ; but the amount is so small, relatively speaking, that it may safely be asserted that the proper channel for the removal of each is that which I have just now stated. Whenever any of these processes is interrupted from any cause, a noxious accumulation of these elements results, and more or less injury is the consequence. You are all familiar with this in the case of the lungs. You are probably less familiar with it in the case of the liver. If the fatty matters which are composed of hydrogen and carbon be not removed in sufficient quantity, they accumulate in the vascular system, the blood becomes loaded with them, and a deposit takes place, first, into the parts naturally adapted for their reception—the subcutaneous cellular tissue, the omentum, mesentery, &c., and finally into other parts not at all designed for the purpose—the muscular tissue, the cells of the liver and kidneys, &c., constituting fatty degeneration of these parts. The danger, however, is not equal in these various situations. In the liver, from the lax nature of the cellular matrix, and the facility with which it admits of enlargement, this lesion may exist to a considerable extent, without

interfering materially with its proper function. In the kidney, on the contrary, from the dense arrangements of the parts, such a thing is impossible; congestion of the vascular apparatus necessarily results, producing the hypertrophied and mottled appearance which is described as the first stage of the complaint. Subsequently, as the pressure increases, the nutrition of the gland is interfered with, atrophy takes place, and the kidney becomes pale, small, and lobulated. This is the advanced stage.

That the disease is really due to the retention of these fatty matters in the system, and especially to their accumulation in a part unfavorably circumstanced for their reception, is proved not merely by a minute examination of the granular matter itself, but by a variety of other considerations which are worthy of your notice. If a patient labouring under the disease be bled from the arm, and the serum be allowed to separate from the crassamentum, it will exhibit a milky appearance from the presence of oil-globules, which can be removed by digestion in ether. Again, it has been noticed by Dr. Johnson as the result of his post-mortem examinations, that Bright's disease is frequently associated with atheromatous deposits in the arteries, which, you know, are really of a fatty nature, and still more frequently with fatty degeneration of the liver. The pale waxy complexion that patients labouring under this disease exhibit, is perhaps due, not so much to the loss of blood, which is constantly oozing through the obstructed kidneys, as to the quantity of fat which is accumulated under the tegumentary membranes. It is a remarkable circumstance that we do not find emaciation to occur in these cases to the extent that we might naturally expect in so chronic a complaint. But the principal argument in support of this view is that which is derived from microscopic examination of the urine. This secretion properly consists of two parts—the water and the saline ingredients; the former in health is a simple percolation from the open capillaries of the Malpighian tufts; the latter is accomplished by means of epithelial scales, which are detached from the inside of the tubuli urinferi, and which grow from time to time by an inherent vital action. The mechanism of these parts is admirably contrived to facilitate this process. The stream of liquid in its descent through the tubuli washes away the scales as they are formed, and both mingling together constitute the secretion such as it exists. These scales can be readily recognised by the microscope, as I have pointed out to you on several occasions. In health, they are quite free from any adherent fatty matter, and the fluid contains scarcely a trace of any oil-globules. In Bright's disease, on the contrary, both of these appearances become conspicuous in proportion to the extent of the mischief. In acute nephritis and scarlatina the number of these scales is augmented, but their size is diminished, and they evidently give the idea that they have not arrived at maturity. In the case of our patient, the absence of these characteristic appearances in the urine led me to conclude that he did labour under granular degeneration of the kidney, notwithstanding the many points of resemblance to that disease which his symptoms presented.

Let us now inquire how this theory will explain the operation of

those agencies, which are ascertained to be the common producing cause of the complaint. These are, you may remember, intemperance, confinement, and unsuitable food. In fact, it is by the employment of these means that the disease has been artificially produced in animals by Dr. Johnson and others. Intemperance acts by introducing into the system oleaginous fluids of weak power (alcohol being, in fact, a combination of two atoms of olefiant gas and one of water), and perhaps, also, by its peculiar action on the lungs; for it has been ascertained that while the primary effect of stimulating liquids is to accelerate the respiration, the remote effect, on the contrary, is to diminish both its frequency and force.

Confinement and bad air operate obviously by depriving the economy of its proper quantity of oxygen. In health, when oxygen is freely supplied to the system, the carbon is consumed as carbonic acid, and the hydrogen as water. In the circumstances here supposed, these effects cannot be adequately accomplished, and the retained carbon and hydrogen enter into combination, and form fatty matters of various kinds. Innutritious diet, or that which is deficient in animal substances, acts injuriously from the want of nitrogen; for you are aware that ammonia consists of one atom of nitrogen and three of hydrogen —consequently, a free supply of nitrogenous matters must tend powerfully to get rid of one of those elements upon whose existence in the economy this disease depends.

I think it unnecessary to tell you that the treatment of this affection, before the present theory was propounded, was as uncertain and unsatisfactory as possible. The most opposite remedies were recommended for its removal, but the only opinion in which all authorities seemed to agree was in its incurability. Tartar emetic and bleeding, assisted by local cupping, were adopted by some, under the idea that it was a real but peculiar nephritis. Diaphoretics internally, and vapour baths were trusted in by others, under the impression that it resulted from suppressed perspiration; and others again adopted diuretics upon no very intelligible principles, though the general impression of the profession was decidedly against their use.

Now, on the contrary, instead of this confusion, our course becomes easy, intelligible, and simple; and though we may not anticipate success in every instance, we can clearly perceive that there is nothing in the nature of the affection to render it necessarily incurable or fatal. The microscope not only enables us to distinguish real granular degeneration, and those congestions of the kidney which are liable to be mistaken for it; but it enables us to do so at that very period in the history of the complaint when the diagnosis is important. However dangerous the disease is in the advanced stage, at the earlier periods it is certainly capable of alleviation, if not of cure. The obvious course of proceeding in any such case would be—1st, to remove the exciting and predisposing causes where they exist, such as intemperance, and residence in an unwholesome atmosphere; 2d, to oxygenize the blood by active exercise in the country and in the open air; 3d, to avoid fatty and all other non-nitrogenous articles of food; 4th, to administer alkalies in free doses, which, by their action on the animal fats, will probably render their elimination more easy of accomplishment; and,

5th, to administer purgatives, so as to keep up a tolerably free action of the bowels.

[For an abstract of Dr. Johnson's views, see 'Half-Yearly Abstract,' Vol. III, p. 188.]

ART. 20.—*Ergot in Retention of Urine.*—M. Allier read a communication on the use of ergot in retention of urine. According to him — 1st, ergot restored contractility to a bladder which had been paralysed by over-distension; 2d, it has succeeded when other remedies have failed; 3d, it has been equally successful in paralysis of the bladder following apoplexy; 4th, it does not exert any beneficial influence over hemiplegic limbs; 5th, it is useless in retention of urine from enlarged prostate; 6th, the medicine must be given in repeated small doses; but it may amount to a drachm and a half per diem.

[A case illustrative of the good effects of the ergot in retention of urine is related by Dr. Jeffreys, of Liverpool (now of Shrewsbury), in the 'Provincial Journal,' for 1844, p. 44. Dr. Ross, of Cambusmore, in the county of Sutherland, reports a similar case; see 'London and Edinburgh Monthly Journal,' for January, 1844, and 'Provincial Medical Journal,' vol. vii, p. 378. See also Johnson's 'Medico-Chirurgical Review,' for July and October, 1839.]

Prov. Med. and Surg. Journal, Sept. 6th.

ART. 21.—*Liquor Potassæ in Strangury.*—Dr. Mulock states that, in three cases of strangury from blistering with cantharides, he found speedy relief from liquor potassæ, in thirty-drop doses every hour. He was led to the use of this preparation from its known effects in relieving irritation of the bladder in other cases. He thinks it may prove an antidote for cantharides taken internally, and suggests that a trial should be made when an occasion offers.

Dublin Quarterly Journal, Aug. 1848.

SECT. VI.—DISEASES OF VARIABLE OR UNCERTAIN SEAT.

ART. 22.—*On the Proximate Cause and Treatment of Gout.* By ANTHONY WHITE, Esq.

(*Medical Gazette,* Aug. 18, 1848.)

[In the following communication Mr. White gives us the result of his study of gout in his own person; his definition of the disease is comprised in the words of Dr. Holland, as below:]

But first, for the sake of clearness, it will be well to define the actual state of our knowledge as to the intimate nature of gout; and

this I think cannot be better expressed than in the following propositions, wherein Dr. Holland has comprised all that is ascertained, or to be strongly presumed on the subject:

1. "That there is some kind of bodily organization disposing to gout, because it is an hereditary disease.

2. "That there is a *materies morbi*, whatever its nature, capable of accumulation in the system, of change of place within the body, and of removal from it.

3. "That though identity be not hitherto proved, there is a presumable relation between the lithic acid or its compounds, and the matter of gout; and a connexion through this with other forms of the calculous diathesis.

4. "That the accumulation of this matter of the disease may be presumed to be in the blood; and its retrocession or change of place, when occurring, to be effected through the same medium.

5. "That an attack of gout, so called, consists in, or tends to produce, the removal of this matter from the circulation, either by deposition in the parts affected, by the excretions, or in some other less obvious way, through the train of actions forming the paroxysm of the disorder.

6. "That there is an intimate relation between the condition of gouty habit and the functions of the kidneys and liver, both in health and disease.

7. "And that the same state of habit or predisposition which in some persons produces the outward attack of gout, does in others, and particularly in females, testify itself solely by disorder of internal parts, and especially of the digestive organs." *

The opinion that hereditary predisposition to gout consists solely in a peculiar character of the ligamentous and other associated textures, is surely untenable, although it has been advocated by some authors of eminence. The disease, however prone to affect the joints chiefly, is incident likewise to all the other fibrous textures of the body without exception. The constitutional disturbance that precedes its attacks —the many functional aberrations of the assimilating, secretory, and excretory organs by which it is accompanied—its erratic character, and the rapidity of its transitions from one part to another—are facts tending most strongly to the conclusion that the immediate cause of the malady is not local, but general, and that the vehicle of its diffusion over the whole system can be nothing else than the circulating fluids.

Furthermore, did we suppose that hereditary transmission of gout is identified with a peculiar condition of those solids which are the most frequent seat of gouty inflammation, its active development would then have to be accounted for in one or other of the two following ways: Either the transmitted peculiarity in question is an actual *materies morbi* deposited in the vitiated textures, or it is such a structural peculiarity of the latter as renders them especially liable to the noxious influence of a morbid principle produced in the body by other causes. Either hypothesis leads to the conclusion that gout is a blood disease.

* Medical Notes and Reflections, by Henry Holland, M.D., p. 116.

The second of the two does this directly and immediately, for it assumes the independent existence of an exciting cause, to be brought in contact with the morbidly predisposed parts through the medium of the circulation; whilst, on the first hypothesis, it is evident that the transmitted *materies morbi* must be taken up into the blood, contaminating its mass, and producing in it effects analogous to those caused by other animal poisons imbibed from without.

But there is another class of solids, namely, those concerned in the functions of organic life, which have paramount claims to attention in every inquiry like the present. It is evident that any inherent vice in one or other of the great chylopoietic viscera must of necessity induce a proportional depravity in the circulating fluids. Reasoning, then, *à priori*, there is nothing unwarrantable in the conjecture that the real *fons malorum* transmitted by the gouty to their offspring is an unwholesome blood-making apparatus. Such a conjecture, I repeat, is by no means improbable, and my own observations and reflections are all in favour of its positive truth.

On the whole, then, we may safely admit that hereditary gout is a disposition to generate a certain morbid matter within the body, whether that disposition be the effect of some abnormal organic condition, promoting its formation or impeding its due excretion, or of some transmitted impurity of blood, which tends, as usual in such cases, to reproduce and continue itself by vitiating the nutritive functions.

The same disposition, but created by other causes, must obviously exist in those cases in which gout occurs as an idiopathic disease. Its individual or ancestral origin is a circumstance which may influence the intensity of its development and its pertinacity in the system, but in no way affects its intrinsic nature. Whether hereditary or not, it presents the same general characteristics, and is of course attributable to the same material agent.

Setting out, then, from this cardinal principle of a *materies morbi* circulating with the blood, we have next to investigate its nature and its origin. And here we are struck, on the very threshold of the inquiry, by the close affinity between the gouty and the lithic-acid diathesis—an affinity so remarkable that a very general disposition prevails among medical writers to consider lithic acid as the true gouty poison, and to impute its presence in the system to the impaired action of the kidneys.

As to this latter notion, the arguments adduced in support of it appear to me to be based on a singular misapprehension of patent facts. The discharge of lithic acid and its salts in the urine is a salutary process; and while the kidneys are actively performing such a process, it is strange, indeed, to charge them with creating the offensive matter they only serve to remove. It is not from the presence of lithic-acid sediments in the urine of the gouty, but from their absence, that we should be warranted in ascribing to defective action of the kidneys the accumulation of that excrementitious matter in the system. If the blood was manifestly surcharged with lithic salts or their equivalents, while none such escaped in the urine, then, indeed, we should have reached the end of our inquiry in full assurance that the kidneys were

the very matrices of gout. But it is not so in reality; and the most we can venture to assert is, that the renal functions, in common with others, are secondarily affected by the cause, whatever it be, of the gouty diathesis.

I think it the more necessary to insist on this point, as it is one on which so acute and lucid a reasoner as Dr. Holland appears to have fallen into error. "The kidneys," he says, "are evidently the organs of the body upon the disordered or deficient action of which depend those changes in the circulating fluids which have the closest relation to all the phenomena of gout." He would, I think, have been nearer the truth if he had said that the kidneys are, of all organs, those whose secretions afford the most faithful and the most readily discernible evidence of the changes aforesaid.

However intimate the connexion between the gouty and the lithic-acid diathesis, evidence is yet wanting to establish their actual identity. If the *materies morbi* we are in search of was nothing else than lithic acid, we should naturally expect to find every considerable development of that product followed by a gouty paroxysm. But this is notoriously not the case. It is no uncommon thing to find the urine constantly loaded, during a long period, with lithic-acid sediments, without the occurrence of a single gouty symptom; while on the other hand, it is known that the gouty paroxysm sometimes occurs without the existence of an excess of lithic acid in the urine. Instances of this kind, occurring in asthenic forms of the disease, have been mentioned by Dr. Todd in the Croonian Lectures for the year 1843:—"I have remarked," he says, "a peculiarity belonging to most of the cases of this kind that I have met with; namely, that the urine does not exhibit the abundant precipitate of lithates which so often accompanies the gouty paroxysm. In some instances there was no precipitate at all; and in others it was very slight. And the specific gravity of the urine was rather below than above the ordinary standard, indicating that no excessive quantity of either urea or lithic acid was held in solution."

The gouty poison, then, is not identical with lithic acid, but is so near akin to it that the chemical and pathological characteristics of the latter may, probably, yet serve as indices to guide us to the discovery of the former.

"Organic chemistry," says Dr. Holland, "has taught us how readily the elements out of which all animal matter is formed are displaced from one combination and enter into others; and how very slight, frequently, are the differences indicated by analysis, between substances eminently noxious to the system, and those indifferent or beneficial to it. We owe, further, to recent experiments, the explicit proof of what simple observation had partly shown before—the remarkable effect upon the whole mass of the blood of minute quantities of certain matters brought into the circulation—leading to the inference of analogous effects from an increased proportion of one or other of its principles accumulating or being unduly retained in the body. . . . These circumstances, now familiar to us, do certainly not identify the material cause of gout with any of the animal excretions just named (lithic acid, urea, the lithic or purpuric salts, &c.); but they tend to

concentrate our views towards them, and give a much more specific direction to future research. The assured connexion of the gouty with the calculous diathesis, the chemical nature of the concretions and deposits in the former, and the evidence that these deposits often become in part a substitute for the more active forms of the disease, all concur in further sanctioning the same general view. If we cannot affirm that urea, the lithic acid, or other animal compounds circulating in the blood, give cause to the phenomena of gout, under the most cautious reasoning we are at least entitled to assume, with some confidence, that these matters secreted from the kidneys *are the equivalents to gouty matter present in the system;* that they have certain proportion of quantity to each other, and that upon their balance depend all the essential characters of the disease, its modifications being determined by various causes, some of them topical, some belonging to general functions implicated in the effects of this common cause."

I particularly invite the reader's attention to the words above printed in italics. They imply that the morbid development of lithic acid and its salts may be due to the presence of some principle altogether unlike them in sensible properties and chemical composition.

And now we may proceed to deal with the special object of this paper, which aims at determining the primary seat, and the essential nature, of the disease in question. To this end I shall succinctly narrate the course of induction whereby I arrived at those views which I desire to recommend to the candid examination of my professional brethren.

Having endured innumerable visitations of gout, and having had recourse to a variety of medicaments, some of which were fearfully destructive to my general health, I at last set about watching attentively the method which Nature herself adopts for the cure of this disease. Thus it frequently happened, during my forty years' conflict with my hereditary malady, that I submitted to the old plan of patience and flannel, leaving the disorder to run its course, and wear itself out by its own violence. On several of these occasions I was attacked with sickness and vomiting, accompanied by acrid bilious discharges from the bowels; and these evacuations were followed by immediate relief as to every local and constitutional symptom. Sometimes the result was an entire cessation of the paroxysm; at other times the alleviation was more partial; but repeated experience convinced me that the degree of relief obtained was always proportioned to the copiousness of the bilious evacuations. Pursuing this hint given me by Nature, when the spontaneous diarrhœa has been too scanty, I have assisted it with five grains of calomel. These in a few hours produced copious bilious discharges; the gout departed, and I was well again.

The conclusion forced upon my mind by these facts, recurring again and again during a period of so many years, is, that not to the stomach, or the kidneys, or to the impaired functions of any other viscus than the liver, is the cause of gout ascribable.

In corroboration of this view, I may appeal to the character of all those medicaments which at various times have been held in estimation as specifics against gout. One property is common to them all, namely, that of strongly stimulating the hepatic functions. The *eau*

médicinale, which was introduced into this country about twenty years ago from France, was a remedy of this class. It was sold in one-drachm bottles (this was the dose), and its effects were certainly very remarkable, frequently removing the most painful attacks of gout in one night. The composition of this potent nostrum long remained a secret. It was conjectured to contain white hellebore; and I recollect the physicians of the Westminster Hospital prescribing a vinous infusion of the latter, in one-drachm doses, with great success, as a substitute for the eau médicinale. The revived use of colchicum or meadow saffron, which I believe to be the essential ingredient in the eau médicinale, has put us into possession of an invaluable antidote to gout; but how does this colchicum act beneficially? Assuredly not on the stomach, which it nauseates; assuredly not on the heart or circulation, which it distresses; but it acts on the secretions of the liver; and long personal experience has taught me that, until the functions of that organ are called into vigorous play, the colchicum is worse than useless.

Latterly it has been my practice to use colchicum in combination with other medicines. When I was in the habit of taking it singly, my dose was generally about sixty drops of the wine of the seeds, repeated every six hours. After three or four such doses the bowels were acted on; the evacuations had the odour of the colchicum, deeply tinted; scalding bile was passed, and I was well, for I needed no more.

Now, if a spontaneous evacuation of bile operates critically to the relief of the gouty paroxysm; if five grains of calomel produce relief; if just so much colchicum or other medicine produces relief as is sufficient to cause a copious discharge of bile, then is it demonstrated that the diminished or altered state of the hepatic secretion, which is always a concomitant of gout, is not to be classed among the secondary phenomena of that disease, as pathologists have hitherto invariably supposed.

Let A and B be any two phenomena whatever, and suppose that B is never found except in company with A, then will there be reason for concluding either that one of the two is the cause of the other, A of B, or B of A, or else that both are parallel effects of some third principle. But suppose it to be found that, whereas B never presents itself unaccompanied by A, yet A may exist without B, and that when both are present, the removal of the former is invariably followed by the disappearance of the latter, then it will be manifest that A is the cause of B.

The correctness of this abstract reasoning will, I presume, be admitted without question. To apply it to the subject of our present inquiry, we have only to substitute for A and B the phrases "impaired functions of the liver," and "paroxysm of gout."

No writer that I am aware of has ever propounded, or even surmised, the doctrine that the proximate cause of gout is a functional disorder of the liver; and I cannot overcome the astonishment that possesses me when I think that it should have been reserved for me to make such a discovery. The principle, when once divulged, appears so plain and obvious, that it is wonderful it should have been over-

looked so long. Such has been the feeling expressed by several of my professional brethren to whom I have communicated my views. Seldom have my conclusions failed in such instances to receive a prompt and full assent, and to elicit from each of my hearers the exclamation, "How is it possible I never thought of that before?" But the history of science is full of examples, showing how inquirers have for ages been shut out by the filmiest barriers from the acquisition of precious truths.

The derangement of the liver, which always accompanies the gouty paroxysm, and manifests itself by unequivocal signs, such, for instance, as the pale colour of the fæces, is too obvious to have escaped notice. Accordingly, writers on the disease have constantly adverted, more or less prominently, to this pathological fact; but they have all failed to assign to it the position it really occupies in the train of symptoms. The tendency of their speculations has generally been to consider the disorder of the liver as consequent upon that of the stomach, whereas the converse doctrine is far more consonant with observation and with physiological principles. Acidity in the stomach is an unfailing element in the gouty diathesis. Now, such a condition of that organ may, undoubtedly, react on the liver, and impede or vitiate its secretions. On the other, we know that a very important office performed by bile is the neutralization of the free acid, which is always developed in the stomach during healthy digestion, and is, therefore, a constant ingredient in chyme; only assuming a morbid character when it is excessive or otherwise abnormal. Hence, given two coexisting facts —acidity of stomach, and deficiency or faulty composition of bile— it will be natural to surmise that the former is the effect of the latter. and nothing less than specific proof could justify our adoption of the opposite conclusion.

It is a fact of great importance to the decision of this question, that, however the administration of antacid medicines may alleviate the heartburn and the other distressing effects of acidity in the primæ viæ, such remedies never rise above the rank of palliatives in the treatment of gout. They have not the least efficacy in restoring the healthy action of the liver; whilst, on the other hand, whatever accomplishes that object never fails to remove every other dyspeptic symptom likewise.

The liver, then, is the *officina* in which is elaborated the *materies morbi* on which the whole train of gouty symptoms are dependent. What may be the precise nature of that poison I do not pretend to determine. That remains an interesting subject for future inquiry, to which I may venture to hope that I have given a fresh impulse and an increased prospect of success, by defining its proper point of departure, and the direction it should take. The one new leading fact which I affirm as demonstrated, is sufficient to indicate very distinctly the mode of treatment which offers the only rational hope of removing the gouty diathesis, and also to explain the success which has partially attended the various empirical methods which have been adopted for the cure of the disease.

The main object to be pursued towards the effectual cure of the gouty paroxysm, by the removal of its immediate cause, is the resto-

ration of the natural functions of the liver, as indicated by a copious discharge of bile through the bowels. This object may be attained, more or less promptly and sufficiently, by the administration, either of calomel or colchicum, or of some other potent deobstruent of the hepatic system. But here, as in other instances familiar to the minds of my readers, the principle of combining analogous remedies will be found strikingly advantageous. My own practice has long been to rely exclusively for the cure of gout on the following prescription :

℞ Ext. hydr. chlorid,
colchici acet.,
Aloes purificati āā. gr. j ;
Pulv. ipecac. gr. ij.
M. et fiat pilula quartis horis sumenda.

Two or three of such pills are generally enough to produce a considerable disgorgement of the liver, which I then assist with one or two doses of the compound decoction of aloes. By this time the gouty paroxysm has ceased, or much mitigated.

[In conclusion, the author repeats that gout is only a peculiar manifestation of functional hepatic disease.]

ART. 23.—*Treatment of Acute Rheumatism.* By Dr. JAMES TURNBULL.

(*Edinburgh Med. and Surg. Journal,* No. 176.)

In treating acute rheumatism, the first point which I take into consideration is, whether the patient will bear bloodletting from the system or not ; and in all cases where the constitution of the patient is of ordinary strength, and the febrile disturbance considerable, with full pulse, and much redness, pain and swelling of the joints, I do not hesitate to direct that twelve or sixteen ounces of blood should be taken from the arm. This prepares the system to receive the full benefit of the medicinal part of the treatment, which is often quite inefficacious until vascular action has been reduced by depletion. When the first bleeding is followed up by other treatment, I seldom find it necessary to repeat it a second or third time ; and when the patient is of weak constitution or anæmic, or when the febrile disturbance is moderate, general depletion is neither necessary nor beneficial. After bleeding, I give from five to ten grains of calomel with a grain or a grain and a half of opium, and next morning a purgative draught, with infusion of senna, Epsom salts, calcined magnesia, and half a drachm of the tincture of colchicum. This is repeated every day, or every second day, according to the effect produced, until three or four doses have been taken. Twenty or thirty minims of colchicum are also given with carbonate of soda or magnesia twice or thrice a day, not, however, with the view of purging the patient, that effect being insured by the other means, but for the purpose of neutralizing and expelling by the kidneys the acid secretions generated in the system in rheumatism as well as gout. Besides using opium with the view of controlling the action of calomel, I also give it the form of pill containing one grain, and repeat it twice, thrice, or four times in the twenty-four hours, whenever the severity of the pain or the want

of sleep are such as to indicate the employment of this remedy. Patients are not unfrequently brought to us having the disease in a subacute form, the pain being very harassing, and yet the constitutional disturbance but trifling. In some instances, too, the disease passes into this subacute form after active antiphlogistic treatment has been adopted. In such cases I give opium in the manner described, and purge the patient moderately.

When all acute symptoms have subsided, I occasionally prescribe quinine; but I prefer the iodide of potassium in compound decoction of sarsaparilla, or infusion of gentian, with occasional warm baths.

The three great remedies employed by almost all medical men of experience in the treatment of acute rheumatism will be found to be bloodletting, calomel as a purgative, and opium; and the chief differences in their methods of treatment consist in the extent to which they use each of them, and the precision with which they combine them so as to adapt them to individual cases, and thus attain their object of cutting short the disease. The plan of treatment already described, with the success of which I have every reason to be satisfied, differs from that recommended by Dr. Macleod, chiefly in the more moderate extent in which bloodletting is practised. He observes that, "in well-marked cases of rheumatic fever, within the first week of their onset, and in individuals of the average degree of robustness, from twelve to twenty ounces of blood may be abstracted with advantage, several successive times in the course of five or six days." It more closely resembles the method of treatment recommended by Dr. Latham, who, while he has observed that, by one of these methods singly, we may, in some cases, treat acute rheumatism successfully, recommends a compound of all the three as safer and more successful. "I believe," he says, "that, in the treatment of this disease, and in the same cases, by the judicious use of opium you may spare blood, and by the judicious use of bleeding you may spare opium; that by calomel and purgatives properly administered you may make bleeding and opium less needful, and that by bleeding and opium discreetly employed, you may leave less to be effected by calomel and purgatives."

Endocarditis.—Whenever any inflammation of the valves of the heart has been discovered, the preceding method of treatment has been modified, and, in addition to general bleeding, local depletion by cupping or leeches has been practised, and two grains of calomel with half a grain of opium have been given. Where calomel has been prescribed at an early period in large doses as a purgative, I am disposed to think that local depletion is of almost as much importance as the constitutional effect of mercury; for I have seen several instances in which the system could not be brought under the influence of mercury, and yet where the signs of valvular inflammation entirely ceased, the thickening of the valves appearing to subside along with the inflammation of the joints under the same treatment, and as one of many parts affected by a disease which pervades the whole system, but becomes located in certain parts only, of fibro-serous structure.

It has appeared to me that the small doses of calomel with opium often exercise as beneficial an effect upon the rheumatic affection of the joints as upon the cardiac complication, when the calomel is laid

aside immediately upon the system becoming affected. The continued action of mercury upon the system has, however, seemed to me to prolong the disease in a subacute or chronic form in some cases; and my experience coincides, therefore, with that of Dr. Macleod, who states that, at one time, he was always in the habit of giving calomel with opium, but that he repeatedly observed that the rheumatism continued, although the mouth was affected, while it speedily subsided on continuing the narcotic and purgatives without the mercurial. Some have recommended the continuance of the mercurial action for a much longer period than I consider to be either necessary or expedient. Dr. Hope speaks of its employment for three, four, five, or six weeks. I can scarcely, however, think that a valvular murmur, which persists after the mouth has been sore for a fortnight or three weeks, will be more likely to be removed by a prolonged continuance of this debilitating sorbifacient than by the natural absorbent powers of the constitution. In deciding in any case with valvular murmur whether we should bring the patient under mercurial influence, or continue it for a length of time, we should first know if the patient has had any previous attack of acute rheumatism, and should take into consideration every circumstance which can lead us to form an opinion as to whether the murmur proceeds from recent endocarditis, or from old valvular disease. Dr. Taylor's able exposition of the causes of pericarditis and endocarditis, would seem to show that old valvular disease has been not unfrequently mistaken for recent endocarditis.

ART. 24. *Treatment of Acute Rheumatism by Nitrate of Potash.*—[M. Seux confirms the statements of various writers as to the curative powers of nitre in large doses in acute rheumatism. After detailing a case, he observes:]

The dose which it is necessary to exhibit should be at least from four to six drachms a day, dissolved in a pint of ptisan; the dose may be increased to eight or ten drachms, but in that case the quantity of the diluent must also be augmented. In this manner all risk of intestinal irritation may be avoided. With these precautions no unpleasant consequences have followed the exhibition of these large doses of nitre. If in some few cases diarrhœa has resulted, it has in general been readily subdued by the addition of some preparation of opium.

Revue Médico-Chirurg., Avril.

ART. 25.—*On the Remote Causes of Diabetes.*
By WILLIAM WATTS, M.D., Physician to the Nottingham Dispensary.

(*Lancet*, May 20, 1848.)

[Having in previous essays (see Abstract, Vol. I, p. 213) shown that the proximate cause of diabetes is to be sought in some morbid condition of the great sympathetic system, which induces diseased innervation, and consequent imperfect discharge of function in the stomach, Dr. Watts proceeds, in the present series of papers, to demonstrate that the remote causes of the disease are such as are capable of producing this morbid condition of the organic nerves. He observes:]

The remote causes are divided into predisposing and exciting. The hereditary predisposing causes are those which more than any other render the body liable to functional diseases of the assimilating organs, viz. sanguine temperament, strumous diathesis, malaria, &c.; but they are not so powerful in the production of diabetes as are the acquired predisposing causes, which, in the words of Dr. Prout, "are any having a tendency to sap the foundations of organic life, and more especially of the processes of assimilation."

According to the results of my own inquiries, the acquired predisposing causes of diabetes appear to induce it in three separate and very distinct ways. One set acts by primarily inducing active disease of the stomach and other viscera, which, after long continuance, reduces the tone of the organic nervous influence supplied to them, and this terminates in diabetes.

Another set acts by gradually reducing the organic nervous energy to a point beneath that condition which is requisite for the due performance of the organic functions. And the last class of these acquired predisposing causes appears to act proximately upon distant organs, between which and the organic system of nerves there is an intimate relation; and by powerfully influencing the functions of the former, produce a sensible modification of the functions of other organs supplied by the latter.

Diabetes generally results from the conjoint action of several of these predisposing causes, rather than from any applied singly; yet I trust I shall be able sufficiently to illustrate the separate action of the several classes, so as to make the whole subject easy of comprehension.

Of the first class of these acquired predisposing causes, in which the stomach appears to have been subjected for a considerable period to the action of powerful stimulants and irritants, until, at length, its vital power is reduced from too powerful and too long a continued stimulus, the author has adduced several examples in the papers on the proximate cause of diabetes, published in the Lancet, vol. ii, 1842-3, p. 66, and also vol. i, 1845-6, p. 438; and he further illustrates the point by the narration of some additional instances.

[Respecting these and the preceding cases he remarks:]

These cases, together with those I have previously given, are amply sufficient to show the action of the first of the classes into which I have divided the predisposing causes of diabetes. Although the production of a general cachectic condition, accompanied by gastric disease as a consequence of the improper use of mercury, is a fact long known to the world, yet I cannot resist making the following extract from Mr. Travers's very valuable work on Constitutional Irritation, as showing how the functions of organic life are affected by the action of mercury:—"Mr. Swann, the accurate and indefatigable anatomist of Lincoln, in the course of his minute researches into the morbid appearances of the medulla spinalis and its nerves, has rarely been enabled to discover vascularity sufficient to constitute inflammation, except upon the semilunar ganglia of the great sympathetic, which, when the system has been impregnated with mercury, he describes

both upon the surface and upon the section as most unequivocally inflamed, exhibiting, when compared with a sound ganglion, the appearance of a bloodshot eye as compared with an eye in its natural state, or free from coloured vessels."

When it is thus seen that mercury produces inflammation of the semi-lunar ganglia, whence the nerves spring which are distributed to the stomach, and which mainly contribute to the function of digestion; and when it is borne in mind that, amongst the morbid changes of structure found after death in those who have suffered from diabetes, Dr. Andrew Duncan and Dr. Percy have enumerated enlargement of the solar plexus, there will be little difficulty in appreciating how mercury acts as a remote cause in the production of diabetes.

[The second class of acquired predisposing causes mentioned by the author are those which depress organic nervous power primarily, such as insufficiency of food, the depressing passions, &c. These are likewise illustrated by interesting cases; and the author concludes his essay with the following deductions:]

1. That diabetes is a disease of the function of primary assimilation, of a cachectic character, and that it is a congener of gout and scorbutus.

2. That it arises from the operation of causes of a widely opposite character, some of which have a tendency to produce, and do actually cause, structural changes in many of the chylopoietic viscera, but which structural change is not necessarily connected with the existence of diabetes.

3. That the cachectic condition of the organic nervous influence predisposes to structural changes taking place in those organs which minister to the continuance of organic life.

4. That during the existence of any other serious disturbance in the system, supervening either during the course of, or as a further consequence of, those morbid causes which have induced diabetes, this latter, being only a disease of function, is suspended for a while, and returns on the subsidence of the stronger morbid action.

5. That the generic appellation, diabetes, is not correctly limited to the metallic form, but ought to be extended to the insipidus and the ureosus, into both which it is interchangeable.

6. The diabetes mellitus may exist without either the canine appetite or the extreme thirst being present.

7. That diabetes insipidus (as far as I have hitherto been able to learn) never exists without the coexistence of some increase of thirst.

8. That both the morbidly-increased appetite and thirst are not, as is supposed by Drs. Prout, Elliotson, and others, the consequence of the drain exerted upon the system through increased secretions from the kidneys, but are symptoms of a morbid change in the innervation, distributed to the stomach by the organic nerves.

9. That the changes in the character of the solid constituents of the excretions are indicative of the extent to which the primary assimilating process has been effected.

10. That the deposition of fat in the various tissues of the body is the result of an imperfect assimilation of certain alimentary principles,

and that it occurs previously to the stage in which emaciation appears in the downward course of the disease; and also that it follows the emaciating stage, as the disease progresses to its cure.

11. That the existence of the fatty stage is common both to the insipid and metallic form of diabetes.

12. That the disease admits of cure, so far as the existence in the urine of the morbid products of mal-assimilation is concerned; but whether the minor degree of gastric disease which existed prior to the diabetes ever completely subsides is a matter of doubt.

13. That as the various forms of diabetes result from the action of widely-different predisposing causes, and therefore present different types in different cases, consequently no one plan of treatment can be in all cases successful; but that to obtain the most favorable results, the treatment must be modified according to the character of the type and the period of the disease.

Art. 26.—*Clinical Remarks on Dropsy.* By Mr. Corfe.

(*Medical Times*, May 27, 1848.)

[After the enumeration of views on the function and structure of the kidney, peculiar to himself, Mr. Corfe proceeds to speak of dropsy as follows:]

Dropsy, in its general acceptation, is not a disease, but only a symptom of one, in the same manner that redness, swelling, and heat of the skin are the several symptoms of inflammation of the skin itself. In the present day, when pathological anatomy on the one hand, and chemical investigations into the composition of morbid fluids on the other, have afforded so much instruction to the physician, the nosologist may not define dropsy as an idiopathic disease. Some organ, or a set of organs, becomes deranged in the functions; secretion and absorption are no longer duly balanced throughout the system, and an accumulation of serous fluid exhaled from the capillaries is the result thereof. When this effusion takes place from the capillaries throughout the adipose cells of the whole body, it is known as anasarca. When the cells themselves are not broken down or ruptured by the distended fluid, the anasarca is brawny, hard, and tense; but, when the accumulated fluid has destroyed the cellular form of the adipose tissue, the anasarca is then soft, doughy, pitting, and the skin is shining and glazed. The first-mentioned species of anasarca occurs in robust, strong, and plethoric individuals, who labour under no organic disease of the body, and it is the only form of dropsy which really deserves the title of an idiopathic disease, since the precise nature of that disease is not yet satisfactorily elucidated by pathological writers. The second species is almost invariably connected with some morbid changes of structure, and diseased action in the viscera of the body. When dropsy first evidences itself in the legs and ankles, it is usually "cardiac" in its origin; but when it also shows itself in the face and eyelids, in addition to the extremities, it is "renal;" whilst, on the other hand, if it makes its first invasion in the abdomen, it is commonly

"hepatic" in its origin; and valvular cardiac disease, with dilatation of the cavities and thinness of the walls of this viscus, betrays itself in an early effusion into the pleural sacs, constituting dropsy of the pleuræ, or "hydrothorax." When an ovum has escaped from its vesicle, and when, instead of passing along the fallopian tubes into the uterus, it has remained in the body of the ovarium, distended the gland with its peritoneal covering, and has caused inflammation to be set up in its neighbourhood, the origin of "ovarian" dropsy is at once established.

If the mesenteric glands are the seat of scrofulous disease and enlargement, the obstruction which they offer to the circulation, the deficient absorption and nutrition which attends their increase, give rise to "mesenteric" dropsy; whilst the results of peritonitis, by forming adhesions between this serous covering and the intestines, depriving the latter of that peristaltic motion so indispensably necessary to the healthy action of the alimentary canal, causes "peritoneal" dropsy.

The frequent attacks of ague in early life usually leave some morbid changes in the character of the spleen, whereby the portal blood becomes diseased, the liver deranged, the constitution enfeebled, and "splenic dropsy" is the result.

But as it happens in the vegetable world, that if there is too much moisture on the earth, and no sun to vivify the soil and the plants, or, on the other hand, if there is a long drought, and the continued rays of a vertical sun, vegetation under neither of these circumstances progresses or flourishes; so in like manner, if derangement of one organ in the animal frame arises, disorder soon pervades the whole body.

We, therefore, find that, whenever any one organ which is essential to life becomes diseased in its structure, deranged in its functions, other organs, sooner or later, are involved in the general disturbance. It rarely happens, therefore, that dropsy, in the abstract sense, continues for any period to present itself as symptomatic of structural disease in one organ only. If the origin of this derangement should spring from cardiac disease, the undue circulation of blood, and the delay of its smaller columns through the hepatic system, will induce diseased liver, and this change may sooner or later bring on splenic and renal disease. Thus it is that a dropsical patient will oftentimes inform us that "Dr. So-and-So told him his liver was affected, whilst Mr. So-and-So declared he had got some complaint in his heart; but his own family doctor, who brought all his children into the world, was quite sure that his complaint lay in his kidneys!" Now, peradventure, on examination of our patient, with some degree of judgment and careful scrutiny, we shall be satisfied that one and all of the three gentlemen are correct in their diagnosis. The patient, it may be, originally suffered from an acute attack of albuminous urine; this morbid condition of the system induced vitiated blood, cardiac disease, and hepatic derangement, from all of which causes dropsy supervened; so that if the practitioner is acute in his judgment, discriminating in his investigations, and cautious in the formation of his diagnosis, he may generally ascertain which was the offending organ

in the first instance, and how far disease has made its ravages in this and in other organs that have been subsequently involved in the constitutional disturbance.

[In illustration of the clinical history of dropsy, the author adduces the annexed case as one of somewhat difficult diagnosis:]

A man, about the age of 40, presents himself for advice; his frame is somewhat emaciated, his countenance is pallid, and his features are pinched and shrunken. You observe that he bends the trunk forwards, and that, as he addresses himself to you, the respiratory organs are labouring, the alæ nasi are at work, the breathing is hurried, the lips are of a faint leaden hue, and the angles of the mouth are slightly drawn downwards. He shows you his ankles; they are somewhat puffy, but there is no œdema elsewhere. His abdomen is full, tense, and somewhat painful about the epigastric region, but there is no evidence of peritoneal effusion. He states that he has suffered greatly from dyspeptic symptoms, and nauseous taste in the mouth; that his sleep is disturbed, and that he requires a higher posture in bed than heretofore; that his urine is plentiful and tolerably clear; and, moreover, that these symptoms have been gradually pressing on him for several months; but what with anxiety about his family, his work, and his difficulties in business, &c. he had not attended sufficiently to his ailments to induce him to seek any medical advice, or allow himself to be put under any prescribed form of treatment. What is the diagnosis which a reader would form from such an outline? Probably the first impression on the mind would be that it was cardiac disease only; and I believe that a vast number of such cases occur in which the practitioner never sees farther into the man's disease than this; and he judges it is cardiac, merely because the symptoms of organic derangement of that viscus are the most marked and the most prominent. But if he is a scrutinising man, and an attentive clinical student still, although with hoary hairs scattered over his head, he will, I say, go somewhat further in his investigations after the real seat and origin of the disease than this. What does he then elicit? Some of the following pathological features may be drawn out. The early stages of the disease under which our patient now suffers were ushered in, he acknowledges. with some dull aching across the loins; that the urine was then turbid, and perhaps rather scanty; that he is now disturbed three or four times during the night to pass it. We obtain a little of this urine; we find its specific gravity only 1008; it is clear, limpid, and with little colour, faintly acid, containing no albumen. In reply to further interrogations, he confesses that he is occasionally distressed with tightness across the forehead, or a settled dead pain over one brow and temple, which incapacitates him for any mental exercise; that his bowels are capricious as well as his appetite; that all fluids distress him by inducing flatulence and acid eructations; that he never perspires as he formerly did; that the shortness of breath is of more recent date, but that it is unconnected with any history of previous rheumatic disease of the heart. When the hand and the ear are both placed over this organ, we find that its impulse is feeble and diffused, whilst its sounds are dull and prolonged; there may be some preternatural whiz with the systole also.

What may we now infer from these hints which we meet with in our researches after truth? We can confidently affirm that the first cause of dropsy, in this instance, was an albuminous disease of the kidneys. Their secreting structure has thereby become altered in character. They have long ceased to eliminate from the system those solid constituents which enter into the composition of healthy urine. Those constituents have remained in their elementary form in the system, and their presence has given rise to vitiated fluids, especially of the blood; the valves and the nervous system, but especially the brain, are distressed thereby; and the muscular walls of the heart have suffered also from its contact with this poisoned stream, thickening of these parts and dilatation of the cavities have ensued, whilst the obstacles thereby presented to the free exit of the blood from the right chambers of this viscus through the lungs have, on the one hand, given rise to dyspnœa, and, on the other hand, to a delay in the ascent of the hepatic venous blood into the right auricle. The lobular hepatic veins will necessarily become congested, and by their distension they will impede the due circulation of portal blood, and consequently prevent the due secretion of bile from it. The mucous coat of the stomach and small intestines is now the seat of subacute inflammation; softening of this membrane, together with a depraved secretion of an acidulous tendency from its surface, ensues.

Now it must be manifest that, if the disease in question was renal at its onset, and that one has unequivocal evidence that that disease has advanced so far as to deprive the kidneys of their healthy secerning powers, we cannot reasonably anticipate that any decided benefit will follow the administration of saline or stimulating diuretics; whilst, on the other hand, if the complaint had proved to be one purely cardiac, in which the kidneys had not yet participated, that the exhibition of such diuretic remedies might have been not only judicious, but, as is often the case, of the utmost service to the patient, by the relief which they afford in unloading the system and relieving the heart of its burdensome oppression. Again, it may be observed that nothing can evidence the importance of a just diagnosis in the case now alluded to more than the assistance it affords to the use or the abuse of that valuable remedy in dropsy, elaterium. The exhibition of this drug in dropsy supervening upon simple cardiac disease is not only contra-indicated, but is likely to be followed by the most serious and fatal results. It lowers the influence of an organ already enfeebled in its powers, distressed in its action, and altered in its rhythm, so that dropsical effusion increases under its debilitating tendency, and the disease, for which it is administered as a curative measure, is promoted rather than retarded; whilst this hydragogue in renal dropsy, by its powerful operation upon the whole mucous surface of the alimentary canal, carries off a large quantity of those effete matters which the diseased kidneys have been incapacitated from doing, and the poisoned circulation has been relieved, and the oppressed heart has regained tone and vigour under the use of this remedy. Indeed, I know of no remedial agent which has been attended with so salutary and so beneficial a result as the one in question when judiciously administered, in renal dropsy; whilst I have known the most serious

results to ensue from its misapplication in chronic affections of the heart.

The singular change of colour in the whole body, but especially in the face, which attends the early progress of renal disease, or rather granular degeneration of the kidney, is so marked, and is so decisive, that a physiognomist can frequently make an accurate diagnosis of the morbid condition of these organs and their secretion before he interrogates the patient about his symptoms. The pasty look, the uneasy cast of expression, the puffy under eyelid, the bluff cheek, the thick under lip, the dirty skin, and the shining cornea, are features too significant to be mistaken by a practical observer for any other morbid change of internal organs. There may not be doughy legs or puffy ankles; the urine may be plentiful, but it is frothy, and looks like muddy small beer; the patient is obliged to make water three or four times during the night, in consequence of the chemical alteration of this secretion, which now acts as an irritant upon the mucous surface of the bladder; his appetite, too, is capricious; he is distressed with flatulence; the alimentary canal is the seat of disease also, inasmuch as its mucous membrane always undergoes a process of softening, which coexists with the progress of the renal disease; he suffers from occasional giddiness and tightness across the forehead; his memory becomes impaired from time to time, and he tells you that he has a nauseous filthy taste on the palate when he rises in the morning; his bowels are very easily moved, and he is rather more of a relaxed habit than he was wont to be. Now, under such circumstances, the specific gravity of the urine is rarely higher than 1010, but it is found to be loaded with albumen on the addition of nitric acid, or by the application of heat; there is a very scanty amount of urea or of renal salts in it. The blood of the patient is thin, having much serum, and but little fibrine and few red globules.

Art. 27.—*Treatment of Anasarca and certain Dropsical Effusions, by Discharge of the Fluid by Cutaneous Incision.* By M. Lombard.

(*Gazette des Hôpitaux*, and *Dublin Medical Press.*)

[The following is the substance of a clinical lecture:]

I wish to draw your attention to the case of Hubert Simon, æt. 58. This man has come under our care for the third time. The diagnosis on his admission was "considerable hypertrophy of the heart, with contraction of the aortic opening." It is for the anasarca dependent on this disease of the heart that he has each time applied for relief, and by bleeding and the exhibition of diuretics it has always been afforded. This time, however, these remedies have been less successful. Diuretics gave no relief, though pushed to large doses, and hydragogue cathartics failed equally, although they produced abundant watery stools. The anasarca and dyspnœa increased daily, the latter advancing to orthopnœa. The limbs acquired an enormous magnitude; the infiltration extended even to the eyelids, and while in the former attacks we had only to deal with anasarca, the abdominal cavity now became filled with fluid. Such has been his state for the last three

months, and you were convinced that without the means last employed he could not have survived many days.

I have long since drawn your attention to the evacuation of serous collections by openings made in the skin; but I wished that the number of cases observed should impress on you that it is a remedy at present too much neglected by practitioners, proscribed by some, and often improperly employed; but which may be of the greatest service either in curing or palliating one of the severest and most common diseases, usually, it is true, only consecutive, but still frequently causing death, even when the original disease, of which it is a symptom, would have granted the patient a more lengthened term of life.

This is the fourth time that you have seen the ascites disappear along with the anasarca after incisions *properly* made in the skin of the lower extremities. I do not know whether this fact has been before observed. The observations that we have made show that *sometimes* the ascites remains, and *sometimes* disappears. We may lay it down as a rule, that the ascites disappears with the anasarca when it is consecutive to it, and does not depend on abdominal disease, except in the case of aneurism of the abdominal aorta, which comes under the law just laid down. I think that further observations will authorise us in ranging under the law which governs dropsy depending on diseases of the circulating system, that which comes on in cases of albuminous urine, in anæmia, and the different cachectic conditions which are the result either of an alteration of the blood or of general causes; but the number I have already collected does not appear sufficient to establish it as yet.

I insist upon the circumstance of the disappearance of the abdominal effusion, because, as I have already said, that the fact, if it has been observed, has been considered merely as an unusual case, without perceiving that it is a general fact; and also because, in several cases, where I proposed the removal of the serum by incisions, the proposal was rejected as dangerous, and not capable of affecting the ascites. You have been able to assure yourselves that these incisions are by no means dangerous, and that they have the power of removing the ascites along with the anasarca.

"Why," you will say, "if it is true that certain forms of dropsy disappear after puncturing the legs, is paracentesis always performed?" The answer is easy; because it is not generally known that this may occur, and if such cases have been observed, they have been considered as exceptions. Perhaps, also, those who have tried this method have employed it where the original disease was in the abdomen, and consequently without success. They have not examined if the anasarca has preceded the ascites which is indispensable for the success of the operation. Further, I have observed a curious case connected, I think, with those before us. It was a case of hydrothorax with anasarca, which disappeared after the evacuation of the serum by incisions in the legs, although it had previously resisted active treatment. In this case the pleuræ became filled during the progress of anasarca dependent on disease of the heart.

From the earliest periods the idea of treating dropsies by openings in the skin has been entertained. Nature, whose proceedings were

followed by the ancients in their operations, taught them it, for anasarca sometimes disappears from natural rupture or gangrene of the over-distended skin. It is very probable that Rondeletius who, it is said, was the first to entertain the bold and happy idea of opening the abdominal cavity to discharge the serum it contained, was led to it as well by the success of scarifications in dropsy of the cellular tissue, as by the thinning and spontaneous rupture of the umbilical cicatrix which he might have observed.

Why, then, has such an old-established and often so successful an operation been so much abandoned? The reasons are laid down in all authors—the fear of gangrene, of erysipelas, of sloughs, of troublesome ulcerations; and they resort to the operation only when all other means have failed, and the skin is on the point of tearing, and then they merely make punctures, or superficial scratches, which permit the serum to escape in a slow and incomplete manner. This seems to involve several errors. First, is the delay; when the skin has been long distended it loses its vitality, and in many cases sloughs form, when neither punctures, scarifications, blisters, cauteries, nor other means had been used which might have produced them. Secondly, the openings made are insufficient for the prompt escape of the serum, and inflame with great rapidity, causing great pain to the patient, and frequently giving rise to dangerous erysipelas.

All these disadvantages may be avoided by operating early, and instead of punctures making four or five deep incisions down to the fascia, the third of an inch in length, in each leg, in the most depending position; the patient also must be in bed as little as possible, for there he is always wet and cold, and the position is unfavorable for the escape of the serum. He should be seated in an arm-chair near the fire, the legs naked and resting on cloths; and when we have wished to ascertain the exact amount of fluid that has escaped in the twenty-four hours, we have placed them in a foot-bucket. When the serum has all drained away, the legs should be supported by a roller.

I have followed this plan for six years with perfect success in cases of anasarca; and, as I have already observed, the attending ascites has sometimes also been cured.

SECT. VII.—DISEASES OF SKIN AND CELLULAR TISSUE.

ART. 28.—*On the Eruptive Diseases of the Scalp.* By Dr. NELIGAN.

(*Dublin Quarterly Journal*, Aug. 1848.)

The author proposes the following classification of the diseases affecting the scalp:

1. Inflammatory.
   - *a.* Herpes capitis.
   - *b.* Eczema capitis.
   - *c.* Impetigo capitis.
   - *d.* Pityriasis capitis.

2. Non-inflammatory.
   Porrigo capitis.

These he proceeds to describe individually.

1. *Herpes capitis.* This disease usually attacks children between the ages of three and twelve. It is rarely seen in its first stage, or that of vesicle, as it then produces little or no annoyance. When it is seen at its commencement it presents the appearance of a small ring of vesicles, without any inflammation. These soon dry up and desquamate, at the same time spreading at the circumference. In the next stage it is found that the centre, where the eruption first appeared, is thickened and covered with fine scales. As the disease advances, the hair assumes an almost pathognomonic appearance, each hair appearing slightly bent upon itself, twisted, and of a whitish colour, and readily falls out, so that bald patches begin to appear. From this appearance Mr. Erasmus Wilson calls the affection trichonosis furfuracea.

Herpes capitis is the true ringworm of the scalp. The contagious nature of this eruption has been doubted by some, but the author regards this quality to be as distinctly proved as in smallpox. Herpes capitis does not cause (permanent) baldness, the hair eventually growing again; thus constituting an essential difference between this disease and alopecia.

2. *Eczema capitis* is also a vesicular eruption, but it soon loses this character, and presents in its various stages so much diversity of appearance, that its diagnosis is not unattended with difficulty. The eruption is preceded by heat, tingling, and itching, rapidly followed by minute vesicles, crowded in irregular patches. The vesicles usually first appear behind the ear, from whence the disease spreads rapidly, so as, in some cases, to cover the whole scalp in a week or ten days.

With the progress of the affection its appearance varies much; in some places it is only to be recognised by the exudation, which keeps the hair constantly moist; in other spots the scalp is raw or excoriated, and secretes a thin whitish pus, which dries into grayish-brown scabs, presenting cracks and fissures, through which the inflamed scalp is visible. In a third variety, the serous exudation dries rapidly into thin membranaceous scabs; and a fourth is characterised by a repeated eruption of minute patches of vesicles, which follow the course of the eruption on other parts of the body, disappearing in six or seven days, to be rapidly succeeded by a fresh outbreak.

The hair remains unaltered, excepting ulceration of the scalp has taken place; and the disease is not contagious, but has apparently a constitutional origin.

3. *Impetigo capitis* is a pustular disease. Its occurrence in children is preceded for a few days by feverish symptoms, frequently attended with vomiting. The eruption appears either in distinct pustules of a psydraceous character, scattered over the head, or in groups thickly set on an inflamed base. In either case the hair is unaltered; it is usually matted together by purulent secretions and scabs, but it does not fall off or become changed in appearance, even in the most chronic cases.

4. *Pityriasis capitis* is a squamous disease, consisting of numerous papyraceous dry scales, scattered over the head. It gives rise to

much itching, which causes the individual to scratch the head, by which scales are detached in large quantity. In children, the irritation is sometimes so great, that eczematous vesicles complicate the original disease. The hair remains unaltered.

As respects the treatment of this group of the eruptive diseases of the scalp, the author observes that two principles must be laid down: first, that they are inflammatory; and, secondly, that they are constitutional. It is to the neglect of these principles that the difficulties of treating scalp diseases is to be ascribed. One general rule which the author adopts is never to shave off the hair; but he orders it to be cut close with scissors. He also forbids the use of combs.

The local remedies which he is in the habit of employing are the carbonates of soda and potash, either made into an ointment with lard, or in the form of lotion. He uses these of various strengths, according to the form of the eruption, and the greater or less degree of attendant inflammation. The carbonate of potash, being of a somewhat more irritating character, is applicable only to those cases where the inflammation is slight, as it generally is in pityriasis, and in many forms of herpes, and in the more chronic forms of eczema; but the carbonate of soda is best suited to impetigo in all its stages. The quantity of either varies from a scruple to half a drachm to the ounce of lard, to which, in private practice, a few drops of bergamot are ordered. The ointment is applied three times a day, being lightly smeared over the eruption: it is washed off with the alkaline lotion every morning. In cases where the head is covered with thick hard scales, a light linseed poultice is first applied for twelve hours; the scalp is then covered with a piece of old linen spread with the ointment, and covered with an oil-silk cap; this is allowed to remain for twelve hours more, when the scales are readily removed by washing with the alkaline lotion.

The alkaline lotions are prepared by dissolving ʒss or ʒj of carbonate of soda or potash in a pint of rose-water. This is used at least once a day, unless it is used as the only application, when it is to be employed five or six times daily.

In the chronic forms of scalp eruptions the application of a mild stimulant becomes necessary. The preparation preferred by the author is dilute citrine ointment—from half a drachm to a drachm of the officinal ointment to an ounce of lard. This is applied at bedtime, and washed off in the morning with the alkaline lotion.

In the treatment of the inflammatory division of eruptive diseases of the scalp, the author gives the yellow iodide of mercury as an alterative, in combination with hydrargyrum c. creta, and aromatic powder. To a child six years old he gives half a grain of the iodide, two grains of hydrarg. c. creta, and two grains of aromatic powder every second morning; to an older child the same quantity every morning. *In all cases the child is maintained on a strictly milk diet during the entire treatment.*

5. *Porrigo capitis.* [The plan of treatment which the author has found effectual in this obstinate malady is twofold—constitutional and local.] The constitutional remedy is the iodide of arsenic, a powerful alterative, but one which may be given with the greatest safety to a

young child, its effects being duly watched. The dose for an adult is $\frac{1}{10}$—$\frac{1}{4}$ gr., gradually increased; for a child six years old, $\frac{1}{16}$ gr. It is best given in form of pill, or, in the case of a child, in powder with aromatic powder.

The local treatment consists in *cutting* the hair close, and applying a large poultice for twelve hours. As soon as the poultice is removed, the head is well washed with the alkaline lotion, and brushed with a soft brush, the scalp is then covered with alkaline ointment on lint, which is to be renewed twice a day. After a few days, the alkaline ointment is replaced by one of the iodide of lead (ʒss—ʒj), the head being still washed every morning with the alkaline lotion.

Art. 29.—*On the Treatment of Lupus by Cod-liver Oil.* By M. Emery.

(*Revue Méd.-Chirurg.* Août 1848.)

[The author, who is placed in a sphere of extensive observation of skin diseases, had, in common with other physicians, failed to arrest the progress of this frightful malady, when he was induced, in a remarkably severe instance, to give cod-liver oil in large doses (from a pint to a pint and a half in the day). In two months a complete cure was accomplished. Encouraged by this, he applied the same treatment to a great number of cases, commencing in all with 100 grammes (25 drachms), and quickly increasing it to 15 or 20 ounces in the day. If vomiting ensued, it was suspended for a few days, and then recommenced as before. He has treated in this manner as many as *sixty-four* cases of lupus. The majority of these received material benefit, and twenty-four were completely cured. The following cases are among several reported :]

Case I. A female, æt. 20, of good constitution, was the subject of lupus, affecting the right ala nasi, and the upper lip and cheek of the same side. The tubercles were covered with a green scab. No advantage had been derived from any treatment until the cod-liver oil was employed, which was commenced in the dose of eight tablespoonfuls per diem. An attack of erysipelas caused the suspension of the medicine for some time, but it was resumed, and increased to fifteen tablespoonfuls per diem. In three months all the crusts had fallen, and the ulcers had cicatrized.

Case II. On the 6th May, 1847, a woman, æt. 44, was admitted who had been the subject of lupus for twenty years. When admitted the entire nose, the upper lip, the lower eyelid, and the two cheeks were covered with thick scabs, which surrounded extensive ulcerations. She was immediately put upon a course of the oil, under which, in six months, a complete cure was effected.

[Similar testimony respecting the therapeutic powers of cod-liver oil in large doses, in lupus, is borne out by M. Devergie (Journal de Médecine et de Chirurgie, Juillet, 1848); but, on the other hand, the communication of M. Emery is subjected to very severe criticism in a recent number of the 'Annales de Thérapeutiques (Août. 1848). The writer of the critique alluded to partly animadverts upon the

improbability of persuading patients to swallow a pint or two a day of so nauseous a medicine, and also upon the ruinous consequences, in a financial point of view, which must accrue to a public institution from such heroic administration of an article which costs four shillings a pint. Regarding lupus as a form of scrofula, we do not dispute the advantages to be derived from the use of the oil, but at the same time we believe that all the benefit to be derived may be anticipated from a far more moderate quantity than M. Emery's patients were made to swallow.]

Art. 30.—*Diagnostic Characters of Secondary Syphilitic Eruptions.* By M. Ricord.—In the first place, they present, on the whole, the same characters as common eruptions; they are either composed of vesicles, papules, pustules, &c. In this respect the diagnosis is entirely guided by ordinary rules; but there are means of ascertaining the specific nature of the eruption. To do this, we must study the precedents of the case, in order to fix upon the accident which has been the fountain-head of the mischief; namely, the indurated chancre. We inquire whether the patient has or has not had suppurating buboes; whether he has suffered from obstructed glands, without suppuration: we try to find out whether there are still traces of adenitis, either on the posterior part of the neck, or in other regions. In this manner we often reascend from one accident to the other, until we reach the very outset of the disease, unless a mercurial treatment has intervened; for in such a case the chain and succession of symptoms is interrupted. Syphilitic eruptions, which you will bear in mind can never spring up spontaneously, viz. without the existence of a primary accident, are not preceded by any febrile phenomena; the eruption may be said to be apyretic, indolent, involving in a very short time the whole body, and appearing, in some degree, by successive instalments. They do not, as has been asserted, affect the face in preference to any other part, but they spread indistinctly all over the frame. The smell which they have been supposed to emit is far from being a specific one; in fact, there is none at all, except when the suppuration is very abundant, or when the eruption includes parts where it causes a muco-purulent secretion, as, for instance, mucous papules or patches do; but I repeat it, there is nothing specific in the smell, nor is the copper colour mentioned by Swediaur, or the ham-like hue spoken of by Fallopius (which latter has been with reason looked upon as an important sign), an absolute and constant character. In the secondary exanthematous eruptions, which generally come on in the earlier period, there is as much redness as with the common exanthemata, and no alteration in the cutaneous pigment is yet observable; so that no reliance can be put on the colour, and it often happens that men, accustomed to treat skin diseases, mistake simple eruptions for syphilitic exanthemata. At first the redness is a mere congestion, which readily disappears under the finger; a little later it becomes an actual stain, on which pressure has no effect. These purplish-brown stains are also met with in psoriasis, in lepra, and in other diseases; but they generally are surrounded by a much darker areola in secondary syphilis than in any other affection. The *seat* of the cutaneous mani-

festations is not of much value as to the diagnosis; for they may spring up anywhere, as well on the genital organs as in other places; and you recollect, no doubt, that I mentioned before, that they sometimes simulate a primary sore. Nothing, in fact, resembles more an indurated chancre than an ulcerated mucous tubercle, seated on the thickness of the skin or mucous membrane, particularly when it happens to be solitary, and to be placed on the generative organs. As to shape, you will find that secondary eruptions generally present rounded and well-defined patches, the colour of which may in the centre be more or less deep. When the disease is of some standing, they will form distinct groups, which assume the annular or the crescentic form; also that of the figure 8. When they take the shape of segments of circle, they are more defined than in common eruptions. Secondary cutaneous manifestations have very little tendency to suppuration, unless the subject be constitutionally predisposed to pyogeny, and when matter *does* form, it is generally small in quantity, and far from laudable in its nature. The eruptions which do not suppurate will in time disappear altogether, and thus terminate by resolution or desquamation. The scales in these cases are less brilliant, and thinner: they dry more quickly, fall off more frequently in a furfuraceous form, than in unspecific affections, and the scales sometimes come off in large shell-like pieces. Syphilitic patches sometimes get covered with crusts of various dimensions, and of a dark-greenish or blackish hue; their surface is cracked and broken, and generally thicker than in common eruptions. These crusts are sometimes so adhering, that they remain fixed on the spot, notwithstanding cicatrization; they are, in some degree, grooved in the scar, and in some cases the crust is loosened by gradually turning up at the margins as the cicatrix is progressing from the circumference to the centre, and it finally falls off when cicatrization is complete. In cachectic subjects there is much tendency to frequent hemorrhage.

The crusts sometimes accumulate, layer after layer, and form distinct prominences, which constitute the affection known under the name of rupia. When, by the falling of the crust, the ulceration becomes apparent, it assumes generally a rounded form; its fundus is grayish and pultaceous; it is surrounded by a darkish areola, and there is a certain induration in the margins. The tendency to phagedæna is rare, but still it does sometimes happen that these ulcerations make great havoc by extending very rapidly. Bear in mind that secondary syphilitic ulcers cannot spring up spontaneously, as it were; they are always preceded by some eruption, as ecthyma, rupia, papules, or tubercles; such ulcers rarely follow vesicles or psydraceous pustules. One of the most important characters of secondary eruptions (which, indeed, I ought to have mentioned sooner) is a total absence of pruritus, whereas itching is a very frequent symptom of the other kinds of eruptions. When, however, the syphilitic rash includes naturally pruriginous regions, as the anus, the genito-crural fold, the axilla, &c., there may be a good deal of itching, but the latter is then produced more by the irritative properties of the secretion than by the eruption itself.

The cicatrices left after secondary eruptions are very peculiar in

one respect, viz. they may exist without any previous abrasion of surface; this is more especially the case in the papular and tuberculous forms. It seems that, in such cases, a plastic effusion takes place, and causes a certain hardness of the part; when this fibrinous secretion becomes absorbed, a regular cicatrix ensues, and may be looked upon as the result of a kind of atrophy, or falling in of the textures, brought about by an obliteration of the vessels. Secondary syphilitic cicatrices are generally round, purplish, and arborescent; afterwards they are whiter and depressed. They are simulated by the cicatrices after friction with tartar emetic, &c., and are, therefore, not unmistakeable. To sum up; we cannot rely on any absolute character or diagnostic of venereal eruptions; we must take this history into account. The most constant character is the absence of pruritus, next to this the copper colour.

Lancet, April 22d.

Art. 31.—*Treatment of Acne Rosacea.*—M. Campardon adopts the following system: Having restored any deviation from health in the digestive organs, the patient takes tartar emetic in the dose of $\frac{1}{10}$ grain with three grains of the powder of dulcamara every morning, fasting. Nausea, which is sometimes excited at first, soon subsides, and tolerance is effected. The medicine appears to act as a depresser of the power of capillary circulation, and, under its influence, the redness of the skin soon diminishes. The face is also washed with lime-water, or a weak lotion of the bichloride of mercury. If acne rosacea be complicated with acne indurata, the author advises an ointment of the chloride of silver to be rubbed on each tubercle. If the disease proves rebellious, he substitutes friction with an ointment of cantharides, so as to induce inflammation. When this is established, he applies leeches and cold lotion, and on its subsidence the tubercles will be found to have subsided.

Encyclog. Médicale, Mai 1848.

Art. 32.—*Arsenic in Furunculus and Acne.*—Dr. Schweich has prescribed arsenic with great success for some time past in furunculus, and has found the cure very durable. He begins with four drops of Fowler's solution twice a day, until a drachm has been taken; he then increases to five drops and six drops in the same manner. Acne yields to arsenic with the same readiness. He condemns the use of purgatives in both these affections.

Casper's Wochenschrift, and *Brit. and For. Rev.*, Oct. 1848.

PART II.—SURGERY.

SECT. I.—SYMPTOMATOLOGY AND DIAGNOSIS OF SURGICAL DISEASES.

ART. 33.—*Diagnosis of Incomplete Fractures.* By M. DEBROU.—M. Debron, relating a case of fissured fracture of the lower end of the femur, which was undetected during life, observes that while the obscurity of these cases, owing to the absence of crepitus, and all the usual symptoms, renders detection difficult, it is very important for the patient that this should be effected, else he is not placed under restrictions as to the motion of his limb, which are essential to his well-doing, inasmuch as incaution in this respect has led to the development of inflammation, which has terminated in death, or the loss of the limb. *Severe pain* at the seat of the fracture, distinguishable from the more diffused, less fixed, and less intense pain of the accompanying contusion, is one of the best signs. If the indication furnished by this is overlooked or inappreciable, and the limb is not secured, another sign manifests itself, viz. *erysipelas arising at the very seat of fracture*, thus developing itself after the inflammation depending on the contusion had subsided. This erysipelas is accompanied, too, by an œdematous, or pasty feeling, of the part. The delay (perhaps several days) in the appearance of this form of erysipelas arises from the inflammation first occurring among the soft parts around the bone, and spreading from within outwards, inversely to its usual course, it being, in fact, but a symptom of the suppuration which is going on between the bone and the muscles.

Archives Générales, tom. xvi.

ART. 34.—*Diagnosis of Injuries to Tendons and Ligaments.*—In those slight injuries which are commonly called sprains, there has appeared to me to be a difference between injury done to a tendon and that to a ligament. The injury occasioned by a trip in running down stairs, either affects the external ligaments of the ankle-joint, or of the tendons of the peronei muscles, the brevis usually. In the case of the ligaments being injured, there is usually no effusion of blood, and a considerable time is required for getting rid of the pain on moving, particularly if the parts are put on the stretch by using the limb too early: but when a tendon is sprained, there is generally a little blood thrown out into its sheath, and the pain may perhaps be greater than that of the ligaments at first, but by rest it is sooner removed.

Those bruises which occur to the parts of tendons or ligaments just at their insertion into bones produce long and considerable pain, and are of such a character as may lead to the suspicion that a very serious injury has been produced to the bone, or to a neighbouring joint. The insertion of the deltoid muscle into the acromion, and of the ligament of the patella into this bone, when patients in falling strike these

parts, offer the most common cases of this description. These injuries cause the greatest pain and difficulty when the muscles are put in action, and the parts are often very long before they recover.

Observations on some of the Parts of Surgical Practice, p. 212, by J. P. Vincent, 1847.

ART. 35.—*Distinction between Syphilitic and Scrofulous Affections of Bone.* By M. RICORD.

(*Lancet*, June 10, 1848, p. 629.)

Syphilitic Affections of Bone.	*Scrofulous Affections of Bone.*
1. Very rare with young people.	1. Very frequent in youth.
2. Syphilitic precedents.	2. Scrofulous precedents.
3. Compact texture of bones attacked.	3. Spongy or cancellated texture of bones attacked.
4. Superficial part of the bone.	4. Deep parts of the bone.
5. Little tendency to hyperostosis.	5. Much tendency to hyperostosis.
6. The pains which precede the development of the affection increase, and become very intense, until they decrease again, and entirely disappear in the later periods of the disease.	6. The tumefaction precedes the pain, but the latter soon increases, and becomes more and more intense as the disease advances.
7. A tendency to circumscription.	7. A tendency to diffusion.
8. Exostosis.	8. Hyperostosis.
9. Tendency to ossification and eburnation, but very little to suppuration.	9. Tendency to softening, to suppuration, caries, and necrosis, and not to ossification.
10. A chain of syphilitic symptoms, either concomitant or antecedent.	10. A chain of scrofulous symptoms widely differing from those of syphilis, either concomitant, or antecedent.
11. Rapid cure under appropriate treatment.	11. Very difficult cure, often incomplete, and sometimes impossible.

Syphilis may, however, be superadded to scrofula; we must then, in combating any lesion, endeavour to find out to which of the two diatheses it is mostly owing, and select our therapeutic means accordingly.

ART. 36.—*Diagnosis of Congenital Dislocation of the Shoulder.* By W. R. SMITH, Esq.

Fractures and Dislocations, p. 257, by W. R. Smith, Esq., 1847.

The patients usually ascribe the deformity to injury received during childhood, for there is a natural unwillingness to admit any original defect of organization; but, in most instances, the paralysis, upon which the deformity depends, will be found to have existed at birth.

In the instance to which I allude, the shoulder is flattened, the

deltoid and scapular muscles are atrophied, and the capsular ligament is elongated. The head of the humerus can be easily pushed, either inwards or outwards, so as to permit of the glenoid cavity being felt; the whole joint is, as it were, loose; the shoulder droops, and the elongated limb may be said to dangle, rather than to hang, by the side. When the head of the humerus is pushed upwards, the appearance of luxation is removed, and the rounded form of the shoulder is, to a certain extent, restored, although, in consequence of the atrophied state of the muscles, it does not recover its natural fulness. In the true congenital luxation, however, there is superadded to the atrophy of the muscles a malformation of the bones composing the shoulder-joint.

In early life, before the bones have reached their full development, before the muscles which act upon the articulation are called to their full exertion, the outward signs of the deformity may escape observation; but, when the bones of the shoulder have reached maturity, when the osseous prominences which overhang the joint stand out in relief, then it is that the characteristic features of the original luxation become strikingly apparent.

I have myself as yet ascertained, by post-mortem examination, the existence of only two varieties of this malformation. In one of these, the head of the humerus is placed beneath the coracoid process; while, in the other and more rare variety, it is lodged in an abnormal socket, formed upon the dorsum of the scapula, below the outer and posterior part of the acromion.

They may be termed the sub-coracoid and sub-acromial congenital luxations, and may exist either upon one side only, or upon both. Of the latter species I have seen only one example, but several instances of the former have come under my observation within the last few years.

SECT. II.—NATURE AND CAUSES OF SURGICAL DISEASES.

ART. 37.—*Dislocation of the Pelvis.*—[In the Sixth Volume of the 'Abstract,' p. 81, an article is introduced on "Separation of the Sacro-Iliac Symphysis," by M. Kluyskens; the following notice "On Dislocation of the Pelvis" has subsequently appeared in several of the journals:]

M. Murville, in a memoir presented to the French Academy of Medicine, on luxations of the pelvic bones, relates the two following very remarkable examples of this accident. The first was the case of an officer, who fell from a second-floor window, and lighted on the tubera ischii. The sacrum was displaced downwards by the weight of the body. On examination, the crests of the ilia were found to be almost touching the false ribs; the os coccygis, much shattered, projected considerably below. The patient complained of great pain in

the sacro-iliac symphysis, with paralysis of the bladder and rectum, small pulse, and other signs of collapse. He was restored somewhat by stimulants, and when reaction was fully established, he was treated antiphlogistically, the displaced bones being maintained as motionless as possible. No attempt at reduction was considered advisable. This treatment was marvellously successful; not only did the patient survive, but the paralysis diminished, and in ten days the patient was able to walk with difficulty.

The second case is unique. An officer, during a review, was run away with, the horse, at the same time, plunging violently; in one of the plunges he was thrown considerably from his saddle, upon which he descended again with such force as to lacerate the left side of the pelvic arch, without injuring the skin. A second plunge of the animal added to the mischief, completely rupturing the ligaments of the symphysis pubis. When examined, a large inguinal hernia was discovered on the left side, and in the perineum a tumour projected as large as the fist, which could be pushed upwards into the pelvis. The symphysis pubis was separated to an extent which allowed the hand to be insinuated between the ossa pubis. The hernia was reduced, and the bones kept in apposition by bandages, and in three months the patient was able to walk. M. Murville, upon this case, founded some remarks upon the feasibility of the operation of division of the symphysis in labour. In a discussion which ensued, M. Malgaigne doubted that it was a case of simple dislocation, thinking it probable that there was also fracture.

Prov. Med. and Surg. Journal, Nov. 17, 1847.

Art. 38. *Fracture of the Ascending Branch of the Ischium and Descending Branch of the Pubis caused by Muscular Contraction.* By M. Cappelletti.—A man, æt. 54, jumped from a carriage, the horses having run away, and alighted with his feet to the ground, but with one limb in the greatest possible degree of abduction. A surgeon, who saw him immediately, found an enormous swelling at the superior part of the thigh, accompanied with very acute pain, requiring local and general antiphlogistic treatment. After some time he continued his journey, although not recovered. When M. Cappelletti saw him at Trieste, six months had elapsed, and he recognised the following symptoms:—slight swelling at the internal superior part of the right thigh; on exploring this region the patient experienced acute pain, which was renewed by pressure on the tuberosity of the ischium; a moveable osseous body, two inches and a half long, and the size of the finger, could be felt. The patient walked limping, and with pain, and the pain was increased on abduction.

It soon occurred to the author that the loose bone consisted of a part of the ramus of the ischium and pubis detached from the pelvis by muscular contraction. On examining it anteriorly, he found this part defective, and that the loose portion of bone had all the anatomical characters of the defective part. He felt distinctly the circular projection indicating the point where the ascending branch of the ischium unites with the descending branch of the pubis.

Giornale per servire ai Progressi della Patologie e della Terapeutica, 1847.

ART. 39.—*Cases of Strangulated Hernia, in which the Stricture was occasioned by a Band of Lymph effused from the Serous Coat of the Intestine, surrounding and constricting it as by a ligature.* By Dr. PIRRIE, Regius Professor of Surgery in Marischal College, Aberdeen.

(Condensed from *The Monthly Journal of Medical Science*, 1848; p. 770.)

The *first* case was that of a female, about 60 years of age, of a full habit of body, and the subject of a strangulated umbilical rupture. Her medical attendant, a surgeon of long standing in Aberdeen, found it necessary to have recourse to an operation, and of that I was a witness. The hernia returned very suddenly as soon as the margin of the umbilicus was slightly divided; but the symptoms of strangulation continued, and the patient died in ten hours after the operation. I was requested to conduct the post-mortem examination; and, on opening the abdomen, found behind the umbilicus a swelling about the size of a small orange, formed of intestine, with a neck, surrounded by a band of lymph, which embraced and constricted the part as by a cord. The lymph had been effused from the serous coat of the intestine, in consequence of the inflammation excited by the pressure of the margin of the umbilicus. In this case the hernia was returned, but without the stricture having been divided.

The *second* case was that of a female, a patient of my own, about the middle period of life, on whom I had occasion, with the assistance of Mr. Paterson, surgeon in Aberdeen, to perform the operation for strangulated femoral hernia. On carrying up the point of my finger between the hernia and hernial sac to feel for the stricture, I was struck with the circumstance, that the tightness of what I supposed to be the stricture bore no ratio to the extreme urgency of the symptoms of strangulation; and that, after dividing some of Poupart's ligament, by cutting from within the hernial sac, the intestine, on being gently pressed, still remained as tense as formerly, and its contents did not seem to be moved by the pressure. I therefore examined the neck of the hernia with my finger, and perceived a band of lymph, keeping the part tightly constricted, and, in short, constituting the stricture. I gently drew down the intestine, and cut the band in several different parts, when the contents of the intestine could be easily made to move upwards. On being satisfied that all constriction was removed by dividing the band of lymph in various parts, the intestine was returned into the abdomen, and the patient recovered without an unfavorable symptom. If the hernia had been returned without this band of lymph having been discovered and divided, the object of the operation would have been unaccomplished.

The *third* case was that of a female, about 60 years of age, of a remarkably full habit, and who, about two days before I saw her, had been seized with symptoms of strangulation. When I first saw her, the abdomen was tympanitic to a great degree; the vomiting was most distressing; the bowels had not been moved for five days; and she had every symptom of sinking very rapidly. She stated that she had often, on previous occasions, had attacks of what she believed to be colic, and imagined at first that the illness from which she was suf-

fering was only a return of that disorder, and, consequently, anticipated a speedy recovery. I was also informed that, for a considerable time, she had had a disagreeable feeling of tenseness in her left groin, though without swelling, so far as she could perceive; and that, some hours before I was called, while drawing up her limbs in a fit of retching, she felt, to use her own expression, as if something had given way in her groin, and from that moment was relieved from all feeling of tenseness. The symptoms of strangulation, however, continued. I made a most minute examination of all the usual seats of hernia, but could detect no symptom of such a lesion. I requested my colleague, Professor Macrobin, to attend the patient along with me, which he did; and he was also present at the post-mortem examination. On opening the abdomen, there was at its under part a small tumour of intestine seen, before any parts had been disturbed beyond merely turning down the abdominal parietes. It was of a livid colour, about the size of a walnut, and with a narrow neck, tightly embraced by a band of lymph, by which it was so constricted as to make it difficult to pass a probe from that part of the intestine which led to the swelling, into that which constituted the tumour. The intestine was also twisted over itself in the form of a loop. On examining the femoral canal of the left side, a hernial sac was found in it; and the tumour of the intestine had, no doubt, formed a hernia, but returned of itself. The stricture, however, formed by a band of lymph, still remained. Sir Astley Cooper records a case in which Mr. Weston returned a hernia by the taxis without an operation; but the symptoms of strangulation continued, and it was found that the stricture was caused by a band of lymph, which embraced the intestine. In the instance of my patient, the hernia returned without any assistance.

The *fourth* case was that of a female, whom I had never seen during life; but at the post-mortem examination of whose body I was present, in consequence of the request of a medical man who had seen her a short time before death, and who had also often attended her on previous occasions, when in a state of great suffering from disease of the womb. The symptoms, I was informed, were those usually induced by a strangulated hernia; but the medical man could not detect any swelling in any of the usual seats of hernia. On examining the left groin, before opening the abdomen, I thought I felt a very small swelling, which I suspected to be a hernia; and I therefore made a careful dissection of the parts, in presence of the surgeon, who requested me to do so, and of one of my pupils. On cutting through Poupart's ligament from before backwards, the contents of a small hernial sac returned into the abdomen without being touched, and were found to consist of intestine strangulated by a band of lymph, embracing the neck of a small hernia. The hernia was not much larger than a walnut. If it had been discovered during life, and been made the subject of operation, there would have been great risk of its returning into the abdomen without the real stricture being discovered or divided..—(Vide Report on Surgery in the present Volume.)

Art. 40.—*The Pathological Sequences of Myringitis.*

By James Mercer, M.D., F.R.C.S.E.

(Condensed from *The Monthly Journal,* March 1848; p. 647.)

The pathological sequences which result from myringitis are very numerous, and by far the greater proportion of them are commonly fatal. I have endeavoured to arrange these as simply and connectedly as the history, progress, and relative terminations of them enabled me to do; and of these I would enumerate the following list, which I have been able to glean from the records of science, or have seen in my own experience:

I. *Caries of the Parietes of the Tympanum producing Meningitis, without Destruction of the Petrous Portion of the Temporal Bone.*

The pathological connexion between the existence of diseases of the middle ear and those of the membranes and substance of the brain was for a long period unnoticed: it was not until within the last thirty years that special attention was directed to them. The merit of the first improvement in this department of medicine is undoubtedly due to the late Dr. John Abercrombie, so early as 1821. But even at this early period Dr. Abercrombie did not press this important fact so forcibly on the profession as his subsequent experience enabled him to do; for in his case of meningitis of the cerebellum (Case 15th, Ed. 2d, 1829), that proved fatal in 1821, the patient had laboured under all those symptoms which usually attend, and are characteristic of, acute myringitis, and had also a discharge of purulent matter from the left ear very early in the disease. On inspection of the brain, it was found all healthy but the left lobe of the cerebellum. There, on its outer surface, was formed a uniform deposit of thick puriform matter, most abundant on the left side. The pia mater of the cerebellum was highly vascular; the dura mater was healthy; there was some purulent matter about the pituitary gland, and in the cavity of the middle ear, but *there was no appearance of disease of the bones connected with the ear, or of the dura mater covering them.*

This case we look upon as the most simple form, considering the pathological results, of the more extensive ravages which accompany, and are produced by, acute myringitis. It is well known to all practical aurists that, in every case of acute myringitis, considerable morbid changes always result to the parietes of the cavity of the middle ear, and no discharge of pus can take place from this cavity until the integrity of the membrana tympani becomes destroyed. It is unfortunate that no special account of the actual state of the parietes of the cavity of the middle ear has been recorded in the above-quoted case, farther than that "there was some purulent matter in the ear." Had the parietes of the cavity been more carefully examined, a greater extent of disease might have been detected. It is also well known that, if a person has once suffered from acute myringitis, and that this has been more or less successfully relieved—that so long as any purulent discharge takes place from the external ear—the disease still exists in a chronic form; but if the patient becomes exposed to the influence

of those agencies capable of reproducing the disease, it usually returns with all the force of an original attack.

I am inclined, therefore, to view this case as one of myringitis; and it is also further interesting in showing that disease of the membranes, or the substance of the brain, may result from diseases of the cavity of the middle ear, and without any destruction of the petrous portion of the temporal bone.

II. *Caries of the Parietes of the Tympanum, producing Meningitis, or Cerebritis, in consequence of Destruction of the Osseous Septum between its cavity and that of the Cranium.*

This is of more frequent occurrence than the former variety, and is generally a very deceitful and insidious, but a most dangerous, affection. It commences with all the symptoms of simple inflammation of the membrana tympani, or those of its more complicated form, myringitis; and many so affected consider it for a time as a trifling earache. If a discharge of matter takes place from the ear, it is expected that the pain will be relieved; but, on the contrary, it becomes more and more violent. The general course of such cases is, that the patient becomes drowsy and oppressed; delirium supervenes; shiverings; singultus and subsultus tendinum; and ultimately complete coma. It is, also, not uncommonly found to occur in cases where acrid lotions have been employed to check suddenly the purulent discharge from the cavity of the tympanum, without any other counter-irritation having been adopted to prevent the occurrence of inflammation of the brain. In these cases the patient, after complaining for a day or two of having had deep-seated and very acute pain, especially during the night, in the ear, and along the face or side of the neck, suddenly becomes restless and forgetful—lies rolling his head from side to side, tossing about his arms, and in a short time sinks into coma.

In both of these forms the petrous portion of the temporal bone will be found to be more or less destroyed.

III. *Caries of the Parietes of the Tympanum, inducing Phlebitis of the Lateral Sinus and Internal Jugular Vein.*

This is another and by no means an unfrequent termination of complicated acute tympanitic myringitis. In this class of cases, the osseous posterior septum of the mastoid cells gives way, and immediately on its occurrence the dura mater covering the diseased bone becomes diseased, presenting all the symptoms of meningitis. From the proximity of the sigmoid curve of the lateral sinus along the cranial surface of the mastoid cells, the lining membrane of the vein becomes speedily inflamed, and, extending rapidly along it to the heart, forms a fatal phlebitis of the internal jugular vein.

The following case, in the Reports of the Dublin Pathological Society, vol. xix, is one of the most interesting examples of this form of disease in the records of medicine.

A boy, æt. 16, entered the Hardwicke Hospital, in Dublin, May 27th, 1840, under the care of Mr. R. W. Smith. He had been ex-

posed to the greatest hardships and laborious exertions from his earliest youth. He had been ill for seven days previous to his entrance into the hospital; complained of shiverings, and a cold creeping sensation, succeeded by intense pain in the right ear and right side of the face. He had had nausea and vomiting, with loss of appetite; was constantly drowsy, and prevented from sleeping by a loud noise in his ear.

After remaining under medical treatment for a short time he left the hospital and resumed his work, but was soon obliged to discontinue it, from the debility and occasional syncope with which he was overpowered. When he was again admitted he could not walk steadily; but he had no spasmodic or irregular action of the muscles, but he staggered from vertigo; he was thin and pale and had a vacant stare, with large and equally dilated pupils; his answers to questions were slowly but rationally given; he complained of severe shooting pains through the back part of his head into the right ear, from which flowed a greenish, fetid matter; his tongue was white and moist; his pulse 132, sharp and small; and his skin was hot.

He grew rapidly worse after his admission; he slept but little, started frequently from his sleep, moaning from the acute pain in his right ear; whenever he attempted to rise, he supported his head with his hands, and was sensible of a noise in his head like the splashing of water; there was a sense of fluctuation and great tenderness over the mastoid process; a teaspoonful of fetid pus was given exit by incision, and the bone was found denuded of its periosteum; he had great epigastric tenderness and ardent thirst.

Upon the 3d of June he had a jaundiced hue, and an attack of diarrhœa with tenesmus; he had also a distressing cough, and severe pain along the right side of the neck. Upon the 6th, symptoms of arachnitis set in; violent darting pain in the head, alternations of heats and chills; a rapid pulse; delirium; dilated and irregular pupils; vomiting; occasional singultus; he was restless; burning heat of scalp, and cold extremities; he soon became comatose, ceased to answer questions rationally, and died June 11th.

Examination of the head.—The brain was firm, the left hemisphere pale; the right highly vascular in the interior, and the membrane covering it minutely injected with blood, especially along its inferior surface. Three small purulent deposits surrounded by a vascular circle, and apparently encysted, were found at the inferior surface of the right lobe of the cerebellum, where it corresponded to the lateral sinus. The dura mater was separated, by pus and lymph of a green colour, from the anterior surface of the petrous portion of the temporal bone; but there was no perforation of the membrane. Over that portion of bone which constitutes the superior wall of the tympanum it was elevated into a small tumour by a collection of fetid matter, and presented a sloughy aspect. The portion of bone corresponding to this abscess, of a circular form, from about one fourth of an inch in diameter, was dead, and of a dull white colour. The process of separation from the living bone was far advanced, and at one point of its origin the separation was complete, and the aperture thus formed communicated with the cavity of the tympanum; the remainder

of the petrous portion was remarkable for its vascularity; the membrana tympanum had disappeared completely, and the membranous walls of the right lateral sinus, throughout the whole of the mastoid portion of its course, were much thickened, and the lining membrane of the vessel presented a sloughy appearance, being covered with lymph of a greenish hue, and smeared with unhealthy purulent matter. This condition extended along the internal jugular vein and superior vena cava, to within a short distance of the entrance of the latter vessel to the right auricle. The lining membrane of the vena cava was of a dead tawny colour.

IV. *Caries of the Parietes of the Tympanum; Necrosis of the petrous portion of the Temporal Bone; destruction of the Portio Dura in the Aqueductus Fallopii, producing Paralysis of the Muscles of the Face.*

This form of complication with myringitis is of comparative rarity, and with the exception of two cases, accidentally mentioned by Dr. Abercrombie, there is only another complete case on record, and reported by Dr. R. Graves in the Dublin Journal, vol. xx. I have met with one case also in my own experience; but it was complicated with loss of sensation (anæsthesia) of the face, and which I will notice in the next section.

The case of Dr. Graves is as follows:—

A boy, about ten years of age, was admitted into the Meath Hospital, labouring under general dropsy; he appeared of a scrofulous habit, and was much worn down by long-continued diarrhœa. Under treatment his symptoms slowly disappeared. We now observed that the right side of the face was paralysed, and that he had been subject to a discharge from the right ear for seven years previously. The paralysed cheek presented the phenomena usually observed in Bell's paralysis. He was attacked soon after with acute pain in the ear, and in the left side of the head. A fortnight after, convulsions set in; the pain moved from the side to the back of the head, then to the back of the neck, and ultimately extended the whole way down the spine, and about this period the diarrhœa diminished. A few days before his death he was attacked with spasms resembling those of tetanus, and the surface of the body became exquisitely tender to the touch. He never had any loss of motion, and to the last his intellect was perfect. From the period when the pain set in to that of his death the convulsions returned six times.

Post-mortem.—The portio dura was found healthy, the nerve was also healthy from its origin at the base of the brain to the entrance into the meatus auditorius internus. Immediately above this opening the dura mater was of a greenish colour, detached from the bone as if by fluid, and perforated by a round hole, large enough to admit a small crow-quill. On dividing this part of the membrane, the space between it and the bone was occupied by a thick, greenish, offensive pus, and the opening in the dura mater was observed to be opposite to the foramen in the petrous portion of the temporal bones, called the *aqueductus* vestibuli. This opening was much enlarged, and the bone of it was in a carious condition.

The nerves at the base of the brain were bathed in this thick green pus, but the organ itself was everywhere healthy and free from excess of vascularity. The arachnoid was thickened and opaque, and the pia mater not more injected than natural. The ventricles were not distended. The theca vertebralis was much distended by the same kind of matter, which flowed abundantly from any accidental puncture of the membrane. The matter was contained in the sac of the arachnoid, which membrane was quite healthy, and presented its usual glistening appearance; no thickening or opacity in any part of its extent. The pia mater was also free from disease; all the attachments of the ligamentum dentatum remained unbroken. The spinal cord, on being slit up, presented no trace of disease. The roots of all the spinal nerves from the base of the brain were bathed in pus, the presence of which fluid on the surface of the brain and spinal cord had, no doubt, irritated those organs, and occasioned the tetanic symptoms and the cutaneous tenderness. The portio dura was traced through the aqueductus Fallopii, about a quarter of an inch from its entrance; the nerve was completely cut through, and the petrous portion of the bone was extensively destroyed, and presented a mere shell. The membrana tympani and all the internal ear were completely destroyed.

It may be further mentioned here that the spot where the portio dura was cut through corresponds exactly to the point where the great petrosal, or vidian nerve, joins the portio dura, and forms the intumescentia gangliformis.

I shall now proceed to consider the fifth section of cases, which, when they do occur in practice, are usually complicated with those of the fourth; viz. paralysis of sensation in one half of the face—*anæsthesia.*

V. *Caries of the Parietes of the Tympanum; Necrosis of the petrous portion of the Temporal Bone; destruction of the Gasserian Ganglion, producing Paralysis of Sensation in one half of the Face.*

When we find paralysis and distortion of the face, with loss of sensation of the parts, we have reason to suspect disease within the head, even without the existence of any active morbid action in the cavity of the ear. These cases have been referred to by the late Dr. Abercrombie in his section on diseases of the nerves; but he has not favoured us with any cases of anæsthesia of the face produced by the previous existence of myringitis. His cases, however, are of great importance, and relate entirely to those of paralysis and anæsthesia consequent on some morbid state of the membranes surrounding the exit of the nerves from the cranial cavity in the substance of the brain at their points of origin or emanation, or in some parts of their course for distribution. The symptoms of such cases are from those of the special case in connexion with myringitis, which I shall relate, in every respect similar to those described by Dr. Abercrombie. The case is as follows:—A young girl, seven years of age, and of a strumous habit of body, became afflicted with scarlatina anginosa in the summer of 1843. She was the daughter of a travelling gipsey, and resided in a wretched hovel in one of the filthiest alleys in the south side of the town. I was called to see her in the course of one of my

dispensary visits. It was on the sixth day of attack when I first saw her. The cutaneous eruption, which had evidently been very dark, was almost gone; there was great difficulty in breathing, a hoarse voice, sneezing, cough without expectoration and an occasional slight hemorrhage from the nose. The surface of the tongue and insides of the cheeks were covered with numerous aphthæ; the tonsils were much swelled, but there was no evidence of decided gangrene, though there was considerable superficial ulceration on both sides. The child was delirious, and had been so for twenty hours, screaming wildly, and instinctively putting her hands to her right ear, the right side of her face, and neck. When she was coherent, she complained to her mother of a severe pain coming on in these parts; and when I attempted to examine her ear, she instinctively indicated severe agony, and tried to thrust away my hand. A discharge of matter had taken place from the right ear four hours before I saw her; but the symptoms showed no relief. On examining the mastoid process, it was larger than usual, discoloured, and had a slight feeling of softening and pitting. An incision made into it gave exit to a full teaspoonful of very fetid pus; but none of the small bones, or any gritty particles, could then be found in the discharged matter, or in that coming from the outer ear. A large warm linseed-meal poultice was applied to the right ear and side of the face; two grains of calomel, and three grains of Dovor's powder, were ordered to be given every four hours, and, in the intervals, a teaspoonful of weak wine and water.

On the morning of the second day there had been a decided increase of all the cerebral symptoms; the wine and water had been swallowed with difficulty, and part of it ejected again. A small enema of ol. terebinth and gruel, that had been exhibited the previous night, had operated well in emptying the bowels. The discharge still continued, both from the outer ear and the incision in the mastoid process, and, on examining the concha, I found the malleus and incus bones, with the stapes attached to the latter, there amongst the discharge. Several gritty pieces of bone were also picked out from that of the mastoid process; and I fully concluded that complete destruction of the ear bulb had taken place, and that necrosis of the petrous portion of the bone would follow. No palsy of the muscles of the face as yet, but difficulty in swallowing. The eyeball appeared larger than before, and had a dull look. A feather gently rubbed upon it still gave sensation by a sluggish twinkling of the eyelids. Continued the medicines.

At six o'clock p. m. that day I again called, and found the cerebral symptoms the same. There was more incoherence, and extreme restlessness; she tossed about her hands and legs, and whilst I was present she had a short convulsion. There was now distinct paralysis of the muscles of the face; greater difficulty in swallowing; the eyeball appeared still larger, and seemed to be starting from their orbit. It had become deeply congested, and was quite insensible to the irritation of the feather. The skin of the right side of the face might be pierced or pricked, but no sensation was evinced. The inside of the same cheek was in a similar state. I rubbed a little strong salt along the inside of the right cheek, and along the right side of the tongue, but no evidence of

any sapid body being there was shown, and a similar result followed the giving of a little powdered colocynth. On the left side of the face, however, there was distinctive evidence of sensibility remaining, both to pricking, salt, and colocynth; and the eyeball there was also fully sensitive, and apparently healthy. There was a slight fetid and bloody discharge from the right nostril. On examining the aperture of the mastoid I found a spongy-looking mass of bone impacted in the incision there. This I carefully removed by a slight enlargement of the opening, (the mastoid bone was very soft and easily cut,) and removed a great part of the mass of the petrous portion of the temporal bone. I then bathed the ear very gently with a sponge saturated with tepid water; gave her a little pure wine, and ordered a beef-tea enema. All the symptoms, as I left, were gradually increasing in severity.

On washing carefully this necrosed portion of bone, I found it still to possess the conformation of the natural bone; its substance, however, was converted into a spongy mass, and the osseous labyrinth of the ear-bulb formed but a general part of the cancellated structure in it. Early on the third morning I found that, shortly after I left, the convulsions came on with great frequency and violence; shiverings repeatedly; singultus, and ultimately coma, and death about four o'clock a. m. A dissection was granted.

Post-mortem appearances.—To be careful in our examination, we succeeded in securing the entire head, stuffing up its place neatly, and leaving it apparently entire. On removing the calvarium and the dura mater corresponding to it, we found but a trifling sub-arachnoid effusion of opalescent lymph. No serum in the sac of the arachnoid there, but some congestion of the vessels of the pia mater on the upper surfaces of both hemispheres of the cerebrum. On slicing off these there were a few bloody points here and there, similar to those found in cases of simple congestion of the veins of the cerebral substance. The lateral ventricles contained about two drachms of serum, and the septum lucidum and fornix were much softened. The choroid plexuses were much congested. On removing the entire nervous mass, we found the dura mater covering the upper surface of the petrous portion of the temporal bone very much diseased; it was elevated, soft, and spongy, of a dullish colour, and apparently on the point of becoming gangrenous. No distinct aperture was found in it, and it was raised up softly in consequence of the cavity from which the necrosed bone had been discharged, that cavity being completely filled with pus, and, floating on its surface, we found the Gasserian ganglion in a state of perfect destruction. The facial nerve was also found destroyed at its entrance into the aqueductus Fallopii, and was found so until the lower part of the stylo-mastoid canal. The whole of the osseous labyrinth had been destroyed and discharged; the osseous portion of the eustachian tube that opens into the cavity of the tympanum was entire, but evidently diseased, and the internal carotid artery was not affected. Had the diseased action but continued for a few hours longer, the septum between this vessel and the tympanum would have been destroyed, and the vessel would have been opened. None of the tympanic muscles, vessels, or nerves, could be found; the osseous septum between the cavity and the sigmoid groove for the

lateral sinus was entire, and no effects had been produced in the jugular vein.

The inferior surface of the right middle lobe of the cerebrum, that lay upon the affected temporal bone, was highly inflamed, and much softened; there was a considerable effusion of lymph at the inner extremity of the right fissure of Sylvius, around the chiasm of the optic nerves, the tuber cinereum, the corpora albicantia, and the locus perforatus posterior, placed between the crura cerebri. The vascularity extended along the right crus cerebri to the mesocephalon, and thence by the right crus cerebelli, to its right hemisphere. To all these parts the lymphy affusion was chiefly confined, and there was also some fluid in the cerebellar fossæ, the greater part of which had escaped by the removal of the head. The eyeball had not gone on to complete disorganization, but every part of its interior structures showed distinctive evidence that it was far advanced in a state of gangrene. The vitreous body, and all within the iris, were converted into one confused mass.

On dissecting the right nasal fossa and the pharynx, I found the Schneiderian membrane there in a state of extensive ulceration, not only in the general cavity, but also in all the facial cavities. The tonsils and side of the pharynx were also ulcerated; but the pharyngeal opening of the Eustachian tube, though also much ulcerated, was considerably entire. The left side was also much affected, but does not deserve a special description.

It was remarked by Dr. Abercrombie (p. 447), *loc. cit.*, "that a remarkable circumstance connected with the affections of the fifth nerve, is the tendency to inflammation and sloughing in parts which have lost their sensibility, particularly in the eye."

VI.—*Caries of the Parietes of the Tympanum: Necrosis of the petrous portion of the Temporal Bone: Opening of the internal Carotid Artery in its canal of the temporal bone, either alone, or in conjunction with the lateral sinus, or the destruction of the Gasserian Ganglion, or the Facial Nerves:*

From the pathological sequences which I have shown as resulting from the ravages of complicated acute tympanitis, it will be easily understood that the above section of cases can easily form one of their number. The situation of the internal carotid in the canal of the petrous portion of the temporal bone, is not so secure in the nature of its position, or in the thickness of its osseous defences, as not to warn us that, some time or other, it will share a little in its destruction, as a sequence of myringitis similar to what has so frequently occurred to the lateral sinus, and to the fifth and seventh pairs of nerves. There are several vulnerable points in the course of the artery in the canal of the bone, and the wonder is, that not one single case of its destruction has been put on record, so far as I can find; but that it is just as liable to destruction as any of the others are, is our decided conviction.

As I cannot present a single complete case to the profession in reference to this section, I must now conclude my remarks on this subject by trusting that some more favoured observer will yet meet with such a case, and thus complete more fully the melancholy test of sequences that may follow acute tympanitis.

Art. 41.—*Summary of M. Ricord's Opinions on Venereal Diseases.* By Victor de Meric, M.D.

(*Lancet*, June 24, 1848.)

The great class of venereal diseases comprises two very distinct orders: first, the non-virulent diseases, the type of which is blennorrhagia; the second, the virulent diseases, the type of which is chancre.

First order. The blennorrhagic affections do not taint the constition, are not transmissible by heredity, and never yield any positive results by inoculation either on the skin or mucous membranes; they are contagious in the manner of irritants, the simple catarrho-phlegmonous discharge being the most common form.

Second order. The *virulent* affections owe their origin to a peculiar principle, to an ulceration which can be reproduced at will, and inoculable within a certain period. The ulceration always springs up at the very spot where the virulent matter has been implanted, and its evolution takes place in a variable space of time. The virulent effect may remain strictly local, and merely give rise to consecutive phenomena, of which the most common is the suppuration of the inguinal glands; but it may penetrate into the economy, and determine in the same a set of characteristic symptoms. The general infection of the disease is the result of an idiosyncrasy, which does not invariably exist in every individual. The most tangible phenomenon of this infection is the specific induration of the chancre. There is no such thing as a specifically indurated chancre without subsequent symptoms of constitutional syphilis. Once or twice in a hundred cases the induration may be ill defined, and pass unnoticed; but if the attention be directed to the inguinal glands (which inevitably suffer by the infection), the existence of an indurated chancre may by their state be inferred; for a bubo, consecutive to such a chancre, *never* suppurates specifically. There is no constitutional syphilis without a primary local accident. When the infection has taken place we may look for the secondary manifestations within a twelvemonth. But if a mercurial treatment be used, these manifestations may be prevented, or retarded for more or less time, or perhaps for ever. When no treatment, however, has intervened, there is an admirable order in the succession of the manifestations, which is denied only by those persons who will not be convinced. Primary, consecutive, secondary, transitory, and tertiary accidents follow each other with the most perfect regularity. But, I repeat it, a treatment breaks up the order altogether. If a mercurial course has been gone through, the secondary manifestations may, under its influence, be retarded for a variable time; but it does not destroy the diathesis, and merely postpones the secondary symptoms. On the other hand, you will remember that the mercurial treatment does not prevent tertiary accidents, and these may even appear whilst the secondary symptoms are being kept off by mercury; the latter may then make their appearance *after* the tertiary accidents have disappeared, and thus the order of the manifestations may be totally inverted. Constitutional syphilis may be contracted but *once;* the diathesis can never be doubled. The diathesis persists, but the ma-

nifestations are not certain, or inevitable. This diathesis is not incompatible with health. Syphilitic cachexia is very rare. The non-virulent affections require no specific medication; neither do the virulent primary accidents. Mercury is used for the latter only in exceptional cases, namely, where the chancre is indurated. Constitutional syphilis demands a mercurial treatment; but when the later secondary symptoms and the tertiary have come on, mercury should be abandoned, and iodide of potassium be taken up. The latter, then, is the medication *par excellence*. Whenever we have to treat any peculiar disorder or affection of the viscera, along with syphilis, we should never lose sight of the indications which belong to that intercurrent disease, and should even delay the specific medication if found necessary.

Art. 42.—*Dynamics applied to Etiology in Surgery—Fractures of the Cranium—Hernia.* By J. P. Vincent, Esq.

(*Excerpta from "Observations on some of the Parts of Surgical Practice."*)

FRACTURES OF THE CRANIUM.

I. It does not follow that the impetus with which a blow is inflicted should be expended upon the part stricken. The head, as a mass, is made up of structures of various mechanical qualities; some are soft, some elastic, and some hard, with the least degree of elasticity; and in receiving the percussion the various structures may receive the effects of the blow independent of each other. We also find a difference of the injury in the same structure, arising out of the difference in the way in which any given momentum striking upon the part is compounded. Thus, in two blows, the momentum of each may be the same, although the velocity and quantity of matter may differ, if these powers are reciprocal to each other, and then the effects of the impetus may vary considerably. A velocity may be given to a common hammer that may make the momentum equal to a heavy mass moving slowly. Upon these principles it is that great varieties occur from the impetus with which blows on the head are inflicted. If the mass be small, and the velocity great, it must happen that the bone will be fractured and driven in at the part struck; on the other hand, if the mass be great but slowly moved, the impetus acts in a way that allows it to be diffused over the whole head. And in this way great violence may be done without fracturing the bone, which is usually the state in cases of severe concussion. Or the force may be expended at the base of the skull, producing fracture there, and not at the vertex, the part in which the blow may probably have been given; and it still further often happens that in the severe injuries of this kind, where there is evidence of so much internal violence having been produced, that there is no mark of injury in the scalp.

II. The breadth in which a part stricken will break must vary in proportion to the velocity of the striking body, and also to the cohesion or strickage of the matter struck, and the breadth will always be, under any circumstances, some slight degree greater than the impinging body. If the fragility of the inner table be really greater than the

outer, the former ought to be broken in the least possible degree beyond the outer.

It is too readily assumed as a fact that the inner table is always broken to a far greater extent than the outer; but if it is the case, I conceive the explanation to be this: the two tables having a given, although minute space between them, the impetus is broken into two distinct applications. The first blow upon the outer table will necessarily break it to a slightly greater space than the instrument which produces it. After this is effected, then the inner table receives the renewed impetus, which is now imparted to it by the outer table, by which this table, allowing it to have the same frangibility, will be broken to a greater extent than that in which the outer was broken.

III. The direction in which the blow is given alters altogether the effects that are produced on the brain. To explain this it must be remembered that the skull makes, in all its sections, some sort of curve; and also that the contents so nearly approach to the quality of fluid, that every impetus impinged on one part will be transmitted through it in the direction in which the blow is given. If every blow were given at right angles to the tangent of any part of these curves, the effects would be transmitted to the base of the brain. But as this is not always the way they are directed, there are great differences in the effects of fractures, and also concussions, on the sensorial powers. If the blow is in such a direction that it would transmit the impulse to the base of the cranium, the cerebral symptoms will be severe; but if the direction of it transmits the impulse across the brain, then they may be very slight. It is this, I conceive, which has caused some little controversy with surgeons, whether blows on the forehead or on the occiput are the most dangerous. It is not the part stricken, but the direction in which the blow is given, that gives rise to the difference.

About a twelvemonth ago a man was brought to my ward, who had fallen down the hold of a vessel. On examination I found that there was a wound through the upper part of the temporal muscle, on the right side, with a fracture of the parietal bone above the border of the squamous plate of the temporal bone. A piece that a thumb might cover was positively forced in upon the brain, and the surface of the depressed portion was vertical; so that its pressure was from side to side, and not at all towards the base of the skull. This man, who was middle-aged, had never the least symptom expressive of injury to the cerebrum. The depressed piece ultimately became loose, and was removed.

IV. If a blow be made upon the vertex of the skull, whether by the patient falling upon this part, or by the impetus of a moving body, the force may be expended upon and lost in the elastic quality of the bones by which a vibration is produced. The effect of this is to cause a serious concussion of the brain. But if the violence is very great, so that it does not expend its force in this way, then the arched form of the parietal bones which form a cupola, and which is preserved compact by the temporal bones, transmits the impetus to the base of the cranium. In this way it is that fractures at the base of the cranium are produced; and it must be remembered that fractures

often occur at the base without the least appearance of contusion or injury to the scalp.

HERNIA.

I. The walls of the abdomen must be considered as a compages of muscular structure, whose action is chiefly employed in keeping up a uniform pressure on the contents of the cavity. But whilst the walls are preserving the cylindrical form of the cavity, the diaphragm is transmitting its powers through the almost semifluid contents of the abdomen. And in the action of this large muscle we possibly may obtain those terms of a problem that shall explain the nature of the formation of hernia.

II. The figure of the diaphragm is that of an arched dome, but having a tendinous expansion in the middle, it is divided into two arches of muscular fibres. Now it is clear that if a muscular fibre takes a curved form, every point in the curve will act in the direction of the versed line to that point, or, what comes to the same thing, to the perpendicular of the tangent of the point. If the curves of the diaphragm were those of a sphere, those perpendiculars would all concentrate in one point; but this not being the case, the perpendiculars will be directed more copiously on some directions than on others: that is, the action of the muscle will be transmitted with greater force to some parts of the boundaries of the abdomen than to others, and thus determine the seat of hernia. If the chest be narrow, the direction of the accumulated impulses may fall low, as well as if the distance from the diaphragm to the pelvis be but little, and so an increased impulse may be directed to the femoral ring, accounting for the seat of hernia in females.

SECT. III.—TREATMENT OF SURGICAL DISEASES.

Art. 43.—*Gastrotomy in Cases of Obstructed Œsophagus.* By Professor Sédillot.

(*Condensed in various European and American Journals from the Gazette Méd. de Paris*, Jan. 1847.)

The operation here proposed consists in incising the abdominal parietes opposite the anterior wall of the stomach, making an opening into the latter, and connecting the edges of this opening with the external wound, so as to form an artificial fistula, by which sustenance may be administered in cases where irremediable obstruction of the natural passage exists. Such cases, if left alone, are quite desperate, their only possible termination being death by famine; and Sédillot, therefore, holds that it is justifiable to interfere by any means which offers a chance of safety. That the operation which he proposes is not impracticable is proved by various cases (such as that of the celebrated Alexis St. Martin) in which a stomachal fistula occurred, as a consequence of accidental wounds: and also by the experiments of Blondlot

on animals, in one of which he kept a dog in health two years, nourishing him by means of an artificial fistula of the kind described. Experiments of this description have also been performed by Sédillot himself with a successful result. With these facts before him, he argues that, although gastrotomy ought not to be proposed where there is a probability of life being continued for some time without interference, yet in those in which death is evidently imminent, and where there is no other resource, the surgeon ought not to hesitate about giving his patient the chance of a prolonged existence, and freedom from suffering.

If this be admitted, it is evidently of great importance to keep in view those circumstances under which obstruction of the œsophagus might render such an operation necessary. The author, therefore, enters into an elaborate review of all those lesions of the œsophagus which lead to permanent constriction of the natural passage. He gathers from pathological writers a great variety of cases, which he arranges under fifteen heads, viz.:

1. Congenital absence of part of the œsophagus.
2. Stricture in consequence of tumours in the neighbourhood of the œsophagus.
3. Tumours formed between the tunics.
4. Hernia of the mucous membrane.
5. Polypi.
6. Stricture, by atrophy of the tube, without appreciable lesion of its walls.
7. Atresia, from cicatrices, with loss of substance.
8. Fibrous stricture.
9. Fibrous degeneration of the muscular coat.
10. Cartilaginous stricture.
11. Osseous transformation.
12. Complete obliteration.
13. Cancerous stricture.
14. Impermeable stricture of the cardia.
15. Fatal œsophageal stricture without known cause.

The cases to which the operation is applicable, as above enumerated, appear to be referable to two divisions: the first being those cases in which the operation is performed without hope of modifying thereby the original diseased condition, and merely to prevent death by hunger; the second, comprising cases in which the original condition is susceptible of modification, and where the establishment of a new passage to the stomach either assists the cure, or prevents the further progress of the disease. In this respect the proposed operation has a close analogy to its mode of application to the more familiar one of tracheotomy.

The principal cases to which gastrotomy is applicable, according to Sédillot, with the double purpose above mentioned, are those comprised in the fourth, seventh, and thirteenth sections of his arrangement. In the fourth series, in which the mucous membrane is thrust through the other tunics, so as to form diverticula, he holds that the constant passage of the food distending these abnormal pouches is certain to keep up the morbid lesion, and, even by dilating the pouches

still further to hasten the ultimate obliteration of the normal passage; whereas, if the operation of gastrotomy be performed, there is a probability that the pouch may, in time, contract and obliterate itself. In the seventh series, comprising all the wounds and inflammatory lesions of the œsophagus, in which there is hope that the judicious employment of catheterism might ultimately restore the tube to its function, Sédillot holds that gastrotomy will often permit us to continue this treatment when otherwise the death of the patient, by inanition, would have frustrated our efforts; and he believes that, in such cases, the chances of cure will often be greatly increased by the complete rest which is obtained in the intervals of treatment for the diseased portion. Finally, in the truly cancerous lesions, where the diagnosis can be ascertained with any degree of certainty, he conceives repose of the part to be of the first consequence, as both catheterism and the passage of food through the cancerous part tend very much to the rapid progress and fatal issue of the disease; and he thinks, therefore, that gastrotomy may possibly be found to be applicable to cancerous cases at an earlier period than that at which death by inanition is imminent.

It is necessary to state that the operation has never yet been performed by Sédillot, although he so strongly advocates its performance.

Art. 44.—*Cauterization as a Remedy for Accidents resulting from Surgical Operations.* By M. Bonnet, of Lyons.

(Condensed from the *Bulletin Général de Thérapeutique*, Feb. 1848.)

Among the "accidents" or consequences of surgical operations, as amputations or the ablation of tumours, which render extensive incisions of the skin necessary,—erysipelas proceeding from the edges of the solution of continuity, step by step, over a large portion of the cutis, phlebitis and purulent absorption, abscesses in the viscera, humid gangrene and the putrefactive fermentation of substances contained in cavities imprudently opened—are not infrequently observed. Nothing in practical surgery is of deeper interest, or more imperiously demands a new investigation, since it may be stated with confidence that art is deficient in resources to counteract the greater part of these complications. Numerous facts have demonstrated to me the powers of cauterization. Practised either with nitrate of silver, potassa, chloride of zinc, or even the hot iron, according to circumstances, it arrests the progress of erysipelas, phlebitis, and humid gangrene, especially when it is applied with energy, and at the period when these lesions are still accessible to its direct action.

Struck with the results, and comparing its harmlessness with the lesions, so frequently mortal, from incision, ligature, or excision of varices, I considered that cauterization should be substituted as much as possible for all the operations which relate to varices. I developed this general principle in a memoir published in 1843, and I considered cauterization especially as a method prophylactic and curative of phlebitis and purulent absorption. The cauterization of hemorrhoids complicated with prolapse of the rectum, in the form of a ring pro-

jecting externally, was also considered in this memoir. To these results I could add new facts of another order, as the treatment of four cases of varicocele, in which the destruction of the veins by caustic resulted in complete cure without any risk; but I merely mention them as indicating the generality of the law, and I pass on to the special object of this memoir, that is to say, the study of cauterization as a means of counteracting the accidents above mentioned.

1. *Phlebitis.* For the purpose of demonstrating the utility of cauterization in inflammation of the veins, I cited, in my memoir of 1843, two orders of facts—the one relative to phlebitis the consequence of anatomical punctures; the other, to phlebitis the consequence of bleeding. Of phlebitis from anatomical punctures, which I had then treated with the hot iron, the cases were four in number. They were all complicated with inflammation of the superficial absorbent vessels. There was enormous swelling of the forearm and arm in three cases, and of the leg and thigh in the fourth. I have only once since this period had occasion to apply the actual cautery to an anatomical puncture, acting as the point of departure of similar lesions. In this, deep cauterization of the wound carried along the course of the diseased vessels was followed by the same result as in the former cases. In the memoirs of 1843, there was but one case of phlebitis, the consequence of bleeding, treated by the actual cautery. The cellular tissue of the whole arm was in this case the seat of suppuration and gangrene. This tissue was cauterised deeply into the seat of the superficial veins. 'Le Bulletin de Thérapeutique' contains an analogous case, in which the actual cautery arrested a violent phlebitis, the consequence of bleeding in the arm.

When the inflammation is confined to a few centimetres round the punctured vein, and not attended with any sign threatening gangrene, we may content ourselves with less powerful caustics, and such as are more easily applied. We may use Vienna caustic, or caustic potassa. In a case of very painful inflammation of the foot, developed from a puncture of a vein in the foot, in bleeding, six days previously, the chloride-of-zinc paste introduced into the large opening occasioned by the bleeding, and allowed to remain for eight hours, produced an eschar fifteen millimetres in diameter, and completely limited the progress of the inflammation.

Purulent resorption. It would be the triumph of therapeutics to cure this disease, so constantly mortal, and so frequently the result of the larger operations. Aware of the power of the actual cautery to check phlebitis I naturally tried it in cases of purulent absorption. The results were not very favorable; and it is easy to understand that its efficacy must be limited, especially when the absorption follows amputation. In fact, phlebitis, which precedes and generally involves as a consequence purulent resorption, occupies the veins which accompany the arteries, or those which make an integral part of the medullary tissue of the bone. We can only reach the large extremities at the surface of the wound, and it is impossible to cauterize them in their course. When unquestionable symptoms of purulent resorption manifest themselves, pus has already formed in the interior of the viscera, as the liver and lungs, and death is an inevitable consequence.

In spite of these unfavorable conditions, deep cauterization of the wound is the only means which offers any chance of success. In five patients, whose cases are given in the memoir of 1843, three died as quickly as if the cautery had not been applied; a fourth lived three months, the wound resulting from an amputation having been deeply cauterized with chloride-of-zinc paste. He escaped the results of that dreadful disease, from which he would have perished in less than a week. The fifth case, which was cured, resulted from the ablation of a tumour from the side of the tendo Achillis.

M. Cauvière, of Marseilles, has employed the actual cautery in three cases of purulent resorption; in one of which it was completely successful. Since cauterization is the only method which has produced any satisfactory result, I advise its employment, especially at the commencement of the affection, at the period when the swelling and pain in the neighbourhood of the wound indicate that resorption is imminent. It may be done with the actual cautery, or with the chloride-of-zinc paste, which should be left in the wound from twelve to twenty hours.

In a communication to the Academy of Sciences, the 13th of September, 1847, M. Gouyon advised dressing with a solution of three grammes of nitrate of silver in thirty grammes of water. He does not give cases in support of his practice; but the very superficial cauterization thus obtained is probably not so useful as the deep cauterizations which I employ, even these being frequently insufficient to localise the disease.

Traumatic erysipelas. This kind of erysipelas must not be confounded with erysipelas from an external cause independent of an injury, from which it differs in its nature, symptoms, course, gravity, and treatment. No relation can be established between simple erysipelas and inflammation of the lymphatic vessels; but frequently, from the commencement of traumatic erysipelas the skin is observed to be streaked with red lines following the direction of the lymphatics, and which subsequently uniting, give birth to well-marked erysipelas. In spontaneous erysipelas, the diseased part is insensibly blended with the healthy part, and it generally stops where it was originally developed; in traumatic erysipelas, on the contrary, a red elevation, a line of demarcation, separates the erysipelatous from the sound skin, and the evil, at first confined to the site of the wound, encroaches gradually, and frequently to a great extent, upon the healthy part. While spontaneous erysipelas is frequently accompanied with only simple œdema of the cellular tissue, mortification of this tissue is as frequent a consequence of traumatic erysipelas; and this is inevitable when traumatic erysipelas attacks the skin of the penis or scrotum. Simple erysipelas is frequently unattended with any danger; the prognosis in traumatic erysipelas is, on the contrary, always unfavorable. Its appearance, when the wound is deep, leads us to apprehend the development of purulent absorption; it is attended with delirium when it occurs on the hairy scalp; and frequently, without either of these complications, it proves fatal.

The treatment of traumatic erysipelas, compared with that which is proper for the simple variety, is not less different. While emetics and

divers local applications, as vinegar and water, mercurial ointment, &c., appear to produce the most marked results in the latter, which gets well in a few days, under the influence of such treatment, or simply by the expectant plan, the former pursues its course in spite of internal remedies or the local applications usually resorted to. A special mode of treatment can alone arrest its progress. The object of such treatment must be to destroy as much as possible the putrid principles which may be absorbed from the surface of the wound, and to limit the erysipelas to the part which it has already invaded.

Cauterization is the only means by which we can obtain this double result, at the same time that it is the only remedy possessed of any efficacy against phlebitis and purulent absorption; it is the only useful remedy in traumatic erysipelas, which has so close a relation to those affections in its courses and intensity. It may be done with concentrated solution of nitrate of silver, or caustic potassa, applied to the surface of the wound and the affected skin, as employed by Mr. Higginbottom, and subsequently by M. Fanchou. We may use an ointment of nitrate of silver, as recommended by M. Jobert, containing four, eight, or twelve grammes of the nitrate to thirty-two of water, according to the intensity of the disease. These means will suffice in slight cases; but there is a better chance of succeeding by cauterizing the wound deeply, which is the point of departure of the erysipelas. When difficulties present themselves from the extent and depth of the wound, and the surface occupied by the erysipelas, the deep cauterization may be advantageously combined with superficial cauterization of the skin. In the cases in which the traumatic erysipelas makes rapid progress, and neither the nitrate-of-silver solution nor deep cauterization of the wound puts a stop to it, the actual cautery should be resorted to. Larrey recites two very remarkable cases of success obtained by the cautery applied in numerous spots over the erysipelatous surface, and insists on the advantages of this treatment. I have had to regret not having adopted this bold practice under many analogous circumstances.

[The principles advocated in this paper are illustrated by the following cases:]

1. Laceration of the skin of the forearm; traumatic erysipelas; cauterization with nitrate of silver; rapid cure.

2. Traumatic erysipelas of the hairy scalp, succeeding to the opening of an abscess; cauterization of the whole internal surface of the abscess; almost immediate cure of the erysipelas.

3. Extirpation of a scirrhous tumour of the breast, and of numerous glands in the axilla; traumatic erysipelas; cauterization of the bottom of the wound, and employment of nitrate-of-silver ointment; cure.

4. Section of the sphincter in a fissure of the anus; traumatic erysipelas; useless cauterization of the wound with chloride of zinc, and of the erysipelas with nitrate of silver; actual cautery; gangrene of the scrotum; cauterization of this part with chloride of zinc; alarming complications; cure.

ART. 45.—*A New Mode of Treating Deafness when attended by partial or entire Loss of the Membrana Tympani, associated or not with Discharge from the Ear.* By JAMES YEARSLEY, Esq.

(*Excerpta from a Pamphlet forwarded to the Editor of the Half-Yearly Abstract.*)

In 1841 a gentleman came from New York to consult me under the following circumstances:—He had been deaf from an early age, and on examination I found great disorganization of the drum of each ear. On my remarking this to him, he replied, "How is it, then, that, by the most simple means, I can produce in the left ear a degree of hearing quite sufficient for all ordinary purposes; in fact, so satisfied am I with the improved hearing which I can myself produce, that I only desire your assistance on behalf of the other ear." Struck by his remark, I again made a careful examination of each ear, and observing their respective conditions, I begged him to show me what he did to that ear, which I should unhesitatingly have pronounced beyond the reach of remedial art. I was at once initiated into the mystery, which consisted of the insertion of a spill of paper, previously moistened at its extremity with saliva, which he introduced to the bottom of the meatus, the effect of which, he said, was "to open the ear to a great increase of hearing." This improvement would sometimes continue an hour, a day, or even a week, without requiring a repetition of the manipulation. Such an interesting fact could not fail to excite my attention, and it naturally occurred to me to try so simple a method in other cases. I did so in several which appeared to me to be identical with that of my patient, but I invariably failed. I was on the point of abandoning the idea that the remedy could ever be made available in practice, and of considering either that my American patient's case was unlike all others, or that it depended on some idiosyncrasy, when it happened that a young lady came under my care, by the recommendation of Mr. Squibb, surgeon, of Orchard-street. She was the daughter of wealthy parents, whose anxiety for her relief was so great as to induce them to bring her to me long after I had discouraged their visits and openly expressed my inability to relieve her. She had become deaf at a very early age, after scarlatina, which had produced disorganization of the drum of each ear, and the deafness was extreme. With little expectation of success, after so many previous failures, I was induced to apply the new remedy, with some modifications upon my previous experiments. Instead of adopting my American patient's plan, it occurred to me to try the effect of *a small pellet of moistened cotton wool, gently inserted and applied at the bottom of the meatus, so as to come in contact with the small portion of membrane which still remained.* The result was astoundingly successful. On the evening of a day in which she had risen from her bed with the sad reflection that she must be for ever debarred from social converse and enjoyment, she joined the family dinner party, and heard the conversation which was going on around her with a facility that appeared to all present quite miraculous. Day after day the remedy was applied with the same marked success, and eventually she learned the art of applying it herself, and thus became independent of me. It was observed that, *until the wool could be brought in contact with a particular spot at the*

bottom of the meatus, the hearing was not at all benefited, on the contrary, was prejudiced; but the moment it was properly adjusted on that particular spot the hearing was restored. Subsequent experience, in a vast number of cases, confirms this remarkable fact. It is not merely necessary to insert moistened cotton wool to the bottom of the meatus. Such a manipulation would in most cases add to the deafness. It is essential to find the spot on which to place the wool, and adjust it so as to produce the best degree of hearing of which the case may happen to be susceptible. This of course differs according to the variety and extent of the disorganization.

For nearly five years this young lady has used the remedy with undiminished success.

Mr. Griffiths, of Pantgwyn, did me the honour to consult me about a young friend labouring under an affection of the throat. During the consultation it was necessary for me to raise my voice very considerably to make myself heard by Mr. Griffiths, and I observed that when he blew his nose he distinctly passed air through the tympanum. After the consultation, I alluded to his deafness, and the probability, that by a new remedy I could afford him some relief, more especially as he had unconsciously revealed to me, in blowing his nose, a state of ear favorable for success. He readily assented to a trial; and I must be permitted to quote his own statement of the result. On the remedy being applied, he says, " To my utter astonishment I heard every sound so loud, that I felt I had never known what it was to hear until that moment. On entering the streets, the noise was so intense that I was compelled to stop up my ears to deaden the sound; but after a time I became accustomed to it, and can now enjoy the pleasures of social converse without straining my auricular organs, or being obliged to be addressed in a considerable elevation of voice. Personally I continue to apply the remedy with the same beneficial effect, and am convinced of its permanent nature, when persevered in and properly attended to."

The following brief history of Mr. Griffith's case, as detailed by himself, is interesting in many points of view:—" The crisis of a severe attack of scarlatina in my infancy was attended by abscesses in both ears, which produced deafness, and a continual discharge of purulent matter, more or less, until I attained my twenty-second year, when the latter ceased. Occasionally concretions of wax formed in the passage, increasing the deafness. These were removed by syringing, after which a thin pellucid fluid would issue from the ears, during which my hearing was much improved, again becoming worse as the discharge ceased. While the discharge lasted I experienced a slight tenderness in my ears, which also ceased with the discharge. I find that your remedy sometimes does the same thing, and that is my reason for not constantly using it; but if it is *not* applied my hearing is not in the least degree remedied! The discharge is always more profuse when in bed, even without the remedy, and I am somewhat puzzled to account for it."

From this communication, written three or four weeks after his visit to town, it appears that the remedy at first set up an irritation in the ear, which occasionally rendered it advisable that it should be

discontinued; but now I am enabled to state that such obstacle to its use no longer exists, and that he applies it regularly, uninterruptedly, and with undiminished success.

This case, like the first quoted, proved to be one in which there was a loss of a great portion of the membrana tympani; and I may here observe, that all my experience tends to show that this is an essential condition of the ear for success. At the present time I can refer to not very far short of *two hundred cases* in which the new treatment has been successful, and in all of which more or less perforation or destruction of the membrane exists.

A very small quantity of wool is sufficient. It must be moistened in some fluid without any compression, and gently pushed down the meatus with the point of a probe. I have had constructed for the purpose a set of instruments which are calculated to meet and overcome every difficulty; for I need scarcely say that it is very easy to talk of passing a foreign body down the meatus, but it is not so easily done.

With a few rules, which, of course vary with the case, the patient may be taught to manipulate upon himself, and all that is required is to remove the dry wool, and replace it with moist, night and morning, or morning only. This is quite sufficient to maintain the improved hearing in the intervals.

It will be expected that I should say something of the *modus operandi* of this new application; but I can offer nothing that is conclusive. It has appeared to me in some way or other to supply the place of the lost membrane. The moisture is absolutely necessary to its perfect action; for when the wool becomes perfectly dry it impedes rather than improves the power of hearing. Is it possible that moist wool placed at the extremity of the meatus can transmit the vibrations of sound in the same manner as the natural membrane, or must we look for some other explanation? However, of its relieving this kind of deafness there can be no doubt.

The experience of several years has taught me that it is impossible to convey to others, *in words*, such explicit directions as shall enable them to manipulate with any degree of certainty. In fact, it was on this account that I have so long held back from publishing any account of the remarkable fact I had observed in my practice.

The rules, the observance of which is essential to success, more especially apply to the discrimination of the case—the preparation of the ear—the size of the pellet of wool—the degree of moisture—the degree of pressure—the precise spot on which to place the wool—under what circumstances to omit it, and when to resume it, &c. &c. In the absence of such knowledge, circumstances might arise by which not only the patient, but the practitioner might possibly do some serious injury. An instance of the kind has lately occurred. A surgeon brought a case to me in which the treatment was successful; and having seen me produce a great improvement in the hearing, he thought he should be able to succeed also, without further assistance. He inserted the wool, but could not reach the necessary spot; and in endeavouring to withdraw it again some injury was done, which completely ruined the ear for future treatment. I have never since been able to get the remedy to act in this case. Although it is impossible in words to convey all the

necessary information, it will at all times afford me great pleasure practically to illustrate the subject before any practitioner who will favour me with a visit.

As I have already shown, the cases in which the new treatment is at present found applicable are those in which there is partial or complete loss of the membrana tympani: such cases are very frequently accompanied by otorrhœa; but whether this symptom be present or not, the remedy may be found successful.

When internal otorrhœa has become chronic, and the membrana tympani seriously diseased, it appears to me, that so long as the discharge is moderate, and the deeper-seated structures of the ear unaffected, if a tolerable amount of hearing remain, the subject of it is in as good a position as regards hearing as is compatible with the nature of such cases. It is found that the use of astringents to the ear, whether they diminish the discharge or not, invariably aggravate the deafness, sometimes causing permanent tinnitus; and even if the discharge cease spontaneously, which it sometimes does, the hearing is always worse than during the discharge. These circumstances, together with the possibility of inducing cerebral inflammation, taken with the fact, that in the great majority of cases otorrhœa remains during the whole life-time without injury to the patient's health, and without annihilating the sense of hearing, are sufficient to make us direct our attention to the preservation of the patient's health and the maintenance of as great a degree of hearing as possible without the suppression of the discharge. If a good state of health be preserved, and the exciting causes of ear-disease be avoided or guarded against, there is little risk of the fearful termination which attends the spread of the disease inwards to the brain. But as age advances, there is a natural tendency to the suppression of ear-discharges of all kinds, and their spontaneous disappearance is rarely, if ever, attended by any ill effects, but the desirability of such a termination is lessened by the increase which takes place in the deafness.

Happily, the moistened cotton-wool now presents itself as a remedy for such cases, and my experience justifies me in saying, that in a very great majority, when skilfully applied, it will materially add to the comfort, gradually lessen the discharge, and vastly improve the state of hearing.

With respect to the instruments which I use, I may briefly state that they consist of a pair of small forceps, weak in the spring, so as to admit of the blades coming accurately together with the slightest possible pressure. This instrument should differ from the ordinary forceps in another respect; namely, the blades or prongs should have no roughness at their extremities, and should be so rounded as to act as a common probe when in apposition. The intention of this instrument is of course to introduce the moistened wool to the bottom of the meatus, having done which, they should be disengaged from the wool and withdrawn. The blades being then brought together, the forceps may be again introduced, acting as a common probe, for the purpose of adjusting the wool on the spot, which, when covered, produces the best degree of hearing of which the case may be susceptible.

An instrument, then, is required for the introduction, the adjustment, and the withdrawal of the wool; and I need scarcely say, that

the forceps I have described is sufficient, in dexterous hands, to accomplish these requirements; but I have found that my patients have preferred a separate instrument for the adjustment as well as the withdrawal of the wool. For these purposes, therefore, I have constructed a simple rounded bar of silver, probe-pointed at one extremity, and with a small screw at the other: the one end serves to adjust the wool, the other most surely will entangle and withdraw it. These instruments may be procured of Messrs. Weiss, in the Strand, or of Mr. Thompson, Windmill-street, Haymarket.

A few words as to the mode of applying the wool. The practitioner should get a view of the tympanum, and make himself acquainted with the nature and extent of the disorganization. This he will be able to do with the aid of my speculum auris, a description of which appeared in the 'Lancet' so far back as September 1839. It is chiefly distinguished from other specula by having a roughened surface at the extremity of each blade externally, to the extent of a quarter of an inch. The roughened blade clings to the meatus, and enables the operator to *straighten* as well as to *dilate* the passage, and a much better view is thereby obtained. A small piece of fine wool, differing in size according to the case, and fully moistened in water, is then introduced through the speculum to the bottom of the meatus, and adjusted superiorly, inferiorly, anteriorly, or posteriorly, according to the situation of the perforation and other circumstances connected with the case; but care must be taken that the entire opening be not covered, otherwise the experiment will not succeed. It is also indispensable to success that the moisture of the wool should be preserved.

Art. 46.—*On the Treatment of Gunshot Wounds.* By M. Velpeau.

(*Excerpta from a Course of Lectures, translated for the Lancet, by* Victor de Meric, M.D., M.R.C.S.E.)

AMPUTATION.

The principal question to be decided in these cases refers to the adoption of primary or secondary amputation. Before attempting a solution of the problem, it will be well to consider the different stages through which a person, upon whom a complicated gunshot wound is inflicted, usually passes. The first is the period of stupor; this is the result of the sudden shock which the nervous system, and, in fact, the whole organism, experience by the reception of the wound, the patient being mostly in a state of great excitement at the time. This period lasts generally from twenty-four to thirty-six hours, and is followed by the second stage, which is the period of inflammatory reaction; this will appear towards the second or third day, and is analogous to the period of elimination in burns. In alluding to burns, our forefathers firmly believed that gunshot wounds were always complicated with severe burning. You are probably aware that such is not the case; modern surgeons have fully shown that this supposed complication is quite imaginary. Still, I must not omit to remark that gunshot wounds, although they never be complicated by actual burns, have nevertheless several analogies with the latter. For the ball breaks

down the textures, not by the caloric with which it may be charged, but by its violently bruising effects, so that the results are very similar to those of severe burns; and besides this resemblance, you may notice that the period of reaction in gunshot wounds is marked, like the same period in burns, by the casting off of the sloughs.

The period of reaction has two phases: the first is characterised by swelling and inflammation, and extends over two or three days; and the second, by the formation of a slough, and an ichorous discharge. After this second period, or that of reaction, comes the third period, the principal character of which is suppuration. The primary or immediate amputation ought to be performed in the period of stupor; we should not wait until inflammation has set in, for it would continue in the stump, and go on invading the parts until it fastened upon the trunk. If from some consideration or another you do *not* amputate in the first period, it will be advisable to put off the operation until the third stage, viz. the period of suppuration, has set in. It is a very difficult matter, indeed, to decide immediately whether such a great calamity as the loss of a limb should be incurred or not; and I do not think it possible for the surgeon to give a positive opinion, on the receipt of the injury, as to whether it is really impossible to save the limb. Faur was not ignorant of this difficulty, and he came to the resolution of entirely rejecting immediate amputations, for fear of cutting off a limb which might have been preserved. But Boucher, who was a warm adversary of his on this point, contended that Faur, by his anxiety to save limbs, lost a great many patients. Cases of gunshot wounds, complicated by fractures of the femur, are the most puzzling of all; for the fractures, at first sight, do not seem very serious; but a sad experience has nevertheless taught us that they almost always necessitate amputation: such is the opinion of Larrey, Percy, Gaultier de Glaubry, &c. Surgeons engaged in civil practice endeavoured, in 1830, to avoid amputation in cases of complicated gunshot wounds of the thigh. Out of eight or nine such cases, which I treated in my wards at La Pitié, two recovered without amputation, three with secondary removal of the limb, and the rest died. Dupuytren and Lisfranc had also a few recoveries; and several amputations which were performed at the hospital of St. Cloud were followed by complete recovery. The consequences of secondary amputations are, in fact, more favorable than otherwise, because the patients escape the danger of the period of inflammatory reaction, which they have already gone through. But it so often happens that an amputation which at first gave the very best hopes of a happy issue, becomes unadvisable after a short time, on account of local disorders, or the weak state of the patient, that it is our bounden duty, in a great many cases, to have recourse to immediate operation.

When we are called upon to decide the question of primary amputation we should consider, first, the gravity of the wound, *per se*, and then the nature of the instrument by which it is inflicted. Wounds made by bayonets, lances, swords, &c., hardly ever require immediate amputation; it is for gunshot wounds that such an operation is almost exclusively required. During the conflict which a few days ago brought so many wounded into our wards, very few large projectiles

had been fired: you are aware that these will inflict injuries of such a dreadful description as mostly to require amputation without delay, for such wounds are always of a very serious nature. Deer-shot, small shot, &c., produce wounds which very rarely necessitate the removal of a limb; but it is not so with musket-balls, for they are propelled with such force and velocity that they will divide vessels and nerves, and shatter bones into pieces. An ordinary compound fracture, in the vicinity of an articulation, often renders amputation imperative; but the necessity of such a step becomes absolute and unavoidable, if the compound fracture be the result of a gunshot wound. Gunshot wounds also bear some resemblance to poisoned ones: they soon generate really venomous principles. These wounds consist generally in a sort of channel dug out in the very thickness of the textures; the parietes of this channel are bruised and triturated, and the channel itself contains a detritus and slough, which are floating in blood; this blood remains stagnant under a temperature of about 90°; confined and hemmed in by disorganized tissues, it soon undergoes decomposition, gets putrefied, and becomes actually poisonous. If under such circumstances resorption should take place, it is clear that the system will be contaminated by these deleterious principles, and the subsequent phenomena resulting from the stagnation of this noxious liquid sufficiently prove this to be the case. We should therefore not wonder that the surgeons of the fifteenth and sixteenth centuries should attribute the continued and intermittent fevers, the adynamia, the yellow tinge of the face and of the rest of the body which mostly accompany gunshot injuries, to some poison conveyed into the wounds.

If the wound, already dangerous enough by being inflicted with a ball, be complicated by the fracture of the bone, and this fracture be situated in the vicinity of an articulation, there is not a moment to be lost, and the removal of the limb should at once be effected. We recognised three periods in the progress of gunshot wounds; I have to add that between the first and the second there is an intermediate one, which is characterised either by hemorrhage or gangrene. When dangerous hemorrhage occurs after the period of stupor, you should amputate at once, and not wait for the suppurative stage. If, in the same way, gangrene were to appear after the period of prostration, you should not delay the operation an instant, for the swelling would soon prevent you altogether from resorting to the knife, and you would thus lose the only chance of saving your patient. I am bound to tell you that all surgeons do not agree with me in this respect; many think that no amputation should be performed with traumatic gangrene before the latter is distinctly limited. I am much encouraged to follow this line of practice by the good results obtained in the case I operated on the day before yesterday. That individual had his leg and knee shockingly shattered by a ball on the 24th of February; he refused the immediate amputation, and the leg two days after was extensively sphacelated; I therefore took off the limb early on the 27th, and the man is doing well. I did not use chloroform for that patient, nor shall I take advantage of this anæsthetic agent for the patient who is about to be brought in, because the chloroform evidently depresses the

nervous system, and as great prostration always exists in patients who have received gunshot wounds, it is advisable to refrain from any anæsthetic means.

GANGRENE.

Gangrene occasioned by gunshot wounds may be divided into two kinds—the gangrene resulting from a direct cause, and gangrene following upon an indirect cause. The first is unavoidable, and the natural result of the peculiar class of wounds which we are studying. It is principally owing to the contusion and trituration of the soft parts, which are left in a bruised state, and may vary a good deal in intensity. Thus it may involve very thick or only thin layers of textures, and it will, in general, be more severe when seated within bones than in the soft parts, for the latter recede and give way to the force of the projectile, whilst the former, which offer resistance, get more or less crushed. The gangrene resulting from an *indirect* cause is that mortified state of parts which, in general surgical practice, goes by the name of gangrene: it results from, and is, in fact, an effect of, the wound, but does not appear within the latter, and cannot be said unavoidably to follow all gunshot injuries. Of this species of gangrene there are two varieties: the first occurs by the influence, and the very fact of the existence, of the wounds; the second is excited by the inflammation consequent upon this same wound. The first of these two species may be said to depend, first, on the lesion of the bones; second, on the injury done to some nervous trunk; third, on a lesion of the arterial or venous vessels; fourth, on the crushing of the parts. When a ball in its transit through a limb meets with vessels, it may, by this circumstance, occasion several distinct lesions: the principal artery and its larger branches may be injured, and gangrene almost unavoidably occurs in such a case; or the principal arterial trunk may alone be wounded, and gangrene may then not occur at all. If the artery and vein are injured at the same time, gangrene will be almost unavoidable; for, granting that the blood may reach the extremities of the limb by collateral arterial circulation, it is nevertheless but too true that the venous circulation will necessarily be interrupted; blood will get effused between the various tissues, and the consequence of this state of things will be, sanguineous infiltration and engorgement, great distension, and, finally, gangrene. If, on the other hand, the limb is supplied by several *important* arteries and veins, gangrene will not necessarily ensue, although a principal artery and vein have been injured, for the circulation may be carried on by the good-sized vessels which remain uninjured. Thus may the patient escape gangrene, even when both femoral artery and vein have been wounded, for it is extremely probable that the circulation, in such a case, will be continued by the profunda and its vein. Violent division of nervous trunks is also a cause of gangrene. However, in a limb supplied by several large nerves—as in the arm, for instance—the division of one or two of them will not inevitably bring on gangrene; but if the greater number of the nerves distributed to a limb experience a severe lesion, there will not only be paralysis, but gangrene also. A solution of continuity in the skin, however extensive it may be, is never followed by mortification; the same may be said of the muscles, provided

the larger vessels and nerves have escaped. Nor is the mere crushing of the bone a cause of certain sphacelus; but if this injury be accompanied by a laceration of vessels and nerves, as well as bruising and trituration of the soft parts over a large extent, gangrene will inevitably follow. But it is not sufficient for the surgeon to know that sphacelus is a frequent complication of gunshot wounds; he should go further, and endeavour, by the knowledge of this fact, to frame certain rules of practice calculated to promote the safety of his patient.

It is in the power of the surgeon, within certain limits, to give a pretty accurate prognosis as to gangrene, by carefully observing the amount of havoc done by the vulnerating agent. Still many difficulties start up. Thus, when hemorrhage takes place, it may often be extremely hard to say whether the blood proceeds from an artery or a vein; for the tearing, crushing, and bruising of the parts will prevent the blood from issuing *per saltum*. The division of an artery may, on the other hand, cause no hemorrhage at all, for the vessel may be plugged up by a very hard clot, or the blood may get infiltrated among the neighbouring textures without finding an outlet. When an artery has been wounded, we may have two kinds of hemorrhage consequent upon the injury—the gush of blood may be immediate, or may, after some time, follow the detachment of the slough, that the surgeon may well be puzzled when he is expected to found the more or less gravity of the prognosis upon the data furnished by hemorrhage. If the wound implicate at least half the thickness of the soft parts, and vessels and nerves of some size are distributed to the injured textures, there is a great probability of gangrene. To sum up these considerations, it may be said, that when the surgeon has to deal with a gunshot wound, he can, to a certain extent, foretell whether the injury will be complicated with gangrene or not; but there are cases where a decided opinion on this head cannot conscientiously be given.

The prognosis of gangrene, consequent upon a gunshot wound, is far more unfavorable than in cases of mortification complicating an ordinary wound. But spontaneous gangrene, on the other hand, is still more dangerous than sphacelus following a gunshot wound, for the former mostly depends on a cause over which surgery has no control. It may, for instance, be consecutive to a spontaneous arterial lesion, or to some morbid alteration of the whole organism, &c. The arterial lesion consists mostly in arteritis, followed by an occlusion of the vessel, or in some degeneration of the artery. Accidental gangrene is far from being so serious as spontaneous mortification; for though the former as well as the latter depends on the lesion of vascular trunks, it must be noticed that this lesion in traumatic gangrene is merely local, and that it can be remedied by the assistance of art. Gangrene which occurs as a complication of gunshot wounds is more dangerous than that which follows ordinary wounds, because the projectiles which inflict the injury bruise the soft parts, tear and violently divide the vessels and nerves, and crush the bones. This sudden trituration soon produces a mass of putrescent matter, which, by its deleterious effects, acts very unfavorably on the economy, and actually causes the poisoning of the system.

The treatment must be strictly surgical, and may be at once summed up by stating that there is nothing to be done but to remove the part attacked by gangrene. It was the custom formerly, before the tying of arteries was practised, to allow the mortified parts to be cast off by the efforts of Nature. But as we now-a-days understand the application of ligatures to arteries, or the torsion of these vessels, we prefer amputation to the natural eliminating process; for, by allowing the latter event to take place, we run the risk of giving the patient a very bad stump, with the bone protruding the cicatrix, because gangrene always acts more powerfully on the muscular than on the osseous textures. It is a very safe rule at once to have recourse to amputation; but great attention should be paid to the general state of the patient, for a commencement of absorption of the deleterious principles would be a strict counter-indication.

It is evident that the organism contaminated by poisonous principles from a double source will not be able to cope with these formidable attacks; this life or death contest will not last long; the patient will be soon exhausted. Therefore, I may lay it down as a general rule, that it is good practice, when gangrene results from gunshot wounds, to amputate before the appearance of the line of demarcation. This, however, is to be taken as a precept offered *à priori*, and I am bound to add that this, as well as all rules, has some exceptions. If, for instance, as M. Larrey very justly observes, the gangrene begins at the extremity of a limb, or at the finger's end, we may safely wait until the line of demarcation is formed; but if the mortification were to occur in the thigh or middle of the arm, immediate amputation, before the formation of the boundary line, is the only chance left for the patient. The wounded, upon whom amputation is thus performed, before the gangrene is clearly limited, are by this very fact rather unfavorably situated. You can convince yourselves of the exactitude of this statement, by observing the two men upon whom I lately operated; one of them, as you recollect, had his arm amputated, the other, his leg. The stumps are flabby, suppuration is very scanty, and the whole economy seems depressed and exhausted. Now it must be confessed that this unfavorable state of things is not so likely to occur when the gangrene has been allowed time to limit itself. And yet, in spite of this, I must repeat, with reference to gangrene, what I said when speaking of fractures, viz. that we are very often obliged to amputate before the limits of the gangrene appear, for fear of rendering the operation hopeless by injudicious delay, and thereby losing the only chance of saving the patient; just in the same way as it very often happens with fractures, which frequently call for immediate amputation, driven, as we are, by the apprehension that the operation may, at a later period, become quite useless.

DILATATION.

There was a time when it was the rule to cut or dilate immediately gunshot wounds; many surgeons still hold to this practice; and the following are the arguments on which they base their treatment:

It was thought that circular wounds and ulcers could not cicatrize. In effect, it was argued by one party, in order that cicatrization shall

take place, it is necessary that all the points of a wound or an ulcer should be in contact; but this is impossible in a round wound: hence it was argued that another shape was necessary to make it heal. This reasoning is not valid at the present day, for it is perfectly well known that round wounds can cicatrize; that the whole of their circumference and their depth produce granulations, the result of which is the formation of a layer of new tissue, which at length becomes level with the skin, of which it assumes all the characteristics.

Although this principle should be proved false, yet dilatation should be employed, nevertheless, for two reason—1. In order to obviate strangulation. 2. To give room for probing foreign bodies contained in the wound. This last reason is valid in a great number of cases; in fact, it is rare that there do not enter with the ball other foreign bodies of various kinds, as fragments of dress, paper, &c., with which the ball has been in contact, and which are pushed before it. Thus even the portion of skin which it carries before it, and is found in the middle of the tissues, is to be regarded as a foreign body. Hence we see that gunshot wounds frequently contain foreign bodies, and, in order to their discovery and extraction, it is necessary to enlarge the wounds, for which reason dilatation is useful. But, even as thus considered, incision should not be practised as an invariable rule, because if there be no strange body, or if it can be easily seized, it is not necessary; and, to sum up, there is no necessity for dilatation, except space be required to lay hold of any extraneous substances.

INCISIONS.

Incisions are, in general, not necessary to prevent distension and strangulation of parts. The act of freeing the textures prospectively is fraught with danger. I have no doubt that we hazard the life of our patient very materially if we lay open the whole trajet of the ball, as advised by Dupuytren. I would lay it down as a rule, that the practice of making incisions in order to free apprehended engorgement and distension as resulting from gunshot injuries, does not rest on sound principles, and should decidedly not be indiscriminately adhered to. The use of the knife should be restricted to peculiar circumstances, where its interference is of obvious utility; thus, incisions may be made in order to facilitate the extraction of foreign bodies which the surgeon finds it difficult to reach; or to get rid of the distention of an aponeurosis kept on the stretch by an effusion, and which might determine troublesome strangulation of the parts; or, lastly, where such tightening and strangulation have actually occurred.

EXTRACTION OF FOREIGN BODIES.

If the foreign body lies free and unconnected in the wound, and its extraction will not produce further mischief, get rid of it by all means. But it often happens that these foreign bodies are still connected with the tissues; thus may bony fragments, in comminutive fractures, adhere strongly by some points of their surface either to the shaft of the bone or to the periosteum, or to any of the textures connected with the osseous structure, whilst other splinters of bone are quite detached. The latter should be, of course, removed at once; whilst

the former should not be disturbed, and their extraction postponed. Some of the fragments are sometimes very small, and could hardly be seized; the eliminating process should, in such cases, be left to Nature; they will commonly be cast off by suppuration, as are, in fact, all the tissues which the violence of the contusion has changed into an eschar. What are we to do with regard to the balls? It happens so often that they cannot be discovered, in spite of the most diligent search, that it will be advisable not to trouble ourselves much about them. If a ball strikes the front of the chest and comes obliquely in contact with a rib, its course may suffer a complete deviation, follow the convexity of the rib, and lodge in the back, close to the vertebral column, without penetrating the chest at all. What would be the advantage of searching for it in such a case, and thereby make two wounds instead of one? If the ball has actually entered the chest, we must not suppose that the danger of such an injury lies in the presence of the ball within the thoracic cavity; it is the lesion of the viscera which principally puts the life of the patient in peril. Supposing the contents of the chest really wounded, and that we were to enlarge the wound in order to search for the ball, we by this procedure facilitate the entrance of air through the aperture made by the projectile, and its reception into the track of the ball, from which we, on the contrary, should carefully exclude it. The most dangerous complications would ensue from such a practice. If the ball were lodged in the groin or axilla, it would be equally hazardous to attempt immediate extraction, on account of the vessels and nerves which might be wounded by this operation. Balls are, moreover, foreign bodies, the presence of which the tissues bear very well. Larrey gives the case of an old soldier upon whom a ball was found incarcerated in the root of the lung; it had remained in that situation for thirteen years, and had had no prejudicial effect on the man's health. I myself extracted a ball, a little time ago, from the ham of a patient; it had been lodged in that region since 1813, and had not given rise to any accidents.

Balls, as you are probably aware, whatever may be the part where they are arrested, get surrounded by a sort of bag or cyst, which separates them from the neighbouring textures, and prevents them from causing the irritation and inflammation which foreign bodies generally give rise to.

ARTIFICIAL COMPRESSION OF ARTERIES.

Hemorrhage is one of the most fearful complications which accompany gunshot wounds. If the hemorrhage is immediate, the means of stopping it are so well known that I need not dwell upon them. But, hemorrhage is mostly secondary; that is to say, it occurs only when the clot which had plugged up the vessels falls off. Now this secondary hemorrhage is very dangerous in most cases, and often kills the patient in a few minutes; but we shall dread this complication still more when we recollect that a sudden and fatal gush of blood may take place when we least think of it, and without any premonitory symptom. This fact has naturally led surgeons to inquire whether it would not be advisable, in those cases where we suspect that a large artery has been wounded, to use a prophylactic compression on the course of the

vessel by means of a tourniquet. I do not approve of this method, for if the compression is powerful enough completely to stop the circulation through the vessel, it may give rise to gangrene; and we know that gunshot wounds are, by their very nature, sufficiently exposed to sphacelus, so that it would be hardly justifiable to make the patient run an additional risk. If, on the other hand, the compressive force is not sufficient to obliterate the vessel, it is quite useless, and hurtful besides, on account of the pain which it occasions.

BLOODLETTING.

Abstraction of blood, both locally and generally, has been strongly recommended by a great number of surgeons, especially by those who do not advocate the practice of incisions. Venesection has been employed by some practitioners immediately after the receipt of the injury, and repeated several times over with a view of obviating local inflammation and general reaction. These measures are very advisable within certain limits; but they may be fraught with much danger; nay, they may rapidly bring on a fatal issue if not applied with prudence and moderation; for when the patient arrives at the suppurative stage, if he has been weakened by bleeding he will not be able to bear the drain of suppuration, and in gunshot wounds the suppurative process, along with the elimination of the sloughs, is inevitable; we should, therefore, husband the strength of our patient, and not bleed him too much. You must not, in fact, have recourse to venesection merely because your patient is labouring under a gunshot wound, but you should be guided by the usual indications for the abstraction of blood. Thus it will be advisable to bleed immediately after the wound has been inflicted, when the latter involves parts abundantly provided with cellular tissue, if the patient is plethoric, and above all, if the wound has penetrated a splanchnic cavity. Bleeding may also be used in a later stage if the reaction is too violent, or if the inflammatory fever is too intense. Local bleeding has likewise been extensively used in cases of gunshot wounds, by means of the cupping-glasses or leeches. When cupping was resorted to it was employed to answer two ends. The glasses were applied on the wound itself, the margin of the latter having previously been slightly scarified. This was intended to pump up and draw out the poison, just as it is now done with wounds really and truly poisonous, or with those resulting from the bites of snakes. This mode of applying cupping-glasses is now quite abandoned, as the idea that gunshot wounds are venomous is entirely given up. This practice is, however, not bad in itself, since there is really, as I have shown, a sort of poison generated in most gunshot injuries. As for myself, I do not use cupping at all; I prefer injections, which are much better calculated to cleanse the wounds, by washing away all those putrid substances which might prove noxious to the economy. The other end which was held in view when cupping-glasses were applied in the ordinary manner, was to control the pretty intense inflammation which sometimes springs up around the wound; but the scarificator as well as the exhausted glasses are too painful in such cases, and they may advantageously be replaced by leeches. But you must notice that the latter are not advisable except

the inflammation be considerable; and there is no doubt that Dupuytren was quite right when he condemned in strong terms the abuse to which the application of leeches was carried. Lisfranc used to apply them five or six times consecutively around gunshot wounds, not because there was any particular indication for such a course, but from the principle, and *à priori*, in order, as he said, to combat the likelihood of distension in the part, and to render incisions unnecessary. To convince yourselves that this was bad practice, you should remember that distension and strangulation in the track of a gunshot wound are very rare; not one of the wounded we have in the house offered us any example of such symptoms, and those upon whom I performed amputation were equally exempt from it. I prescribed leeches for one of these patients only, not because there was distention, but on account of the inflammation which sprang up around the wound. We must, in fact, beware of carrying the abstraction of blood, by means of leeches, too far; they depress the organism as well as general bleeding, and when the patient, thus weakened, reaches the suppurative period, we find the pus unhealthy, sanious, and scanty; colliquative diarrhœa sets in, and soon carries him off. To sum up, then, it may be said, that no absolute or general rule can be framed for the treatment of gunshot wounds. We should use incisions when the parts are actually overdistended and strangulated, which complications happen very rarely; we should have recourse to local or general abstraction of blood when bleeding is clearly indicated, and we must finally do nothing *à priori*, or to satisfy any ingeniously contrived theories.

INTERNAL REMEDIES.

There are certain indications which it is of importance carefully to fulfil. Pain should be allayed by *opiates*, the blood kept in a diluted state by cooling drinks, and its plasticity lessened by bloodletting and saline purgatives. These precautions will be very appropriate for the first and second periods, and nothing more in the way of general treatment should be done during these stages, for if we were then to venture upon tonics we would be sure to bring on a state of excitement anything but beneficial. In the third period, however, we should see that the patient be supported; a slightly tonic, but unstimulating diet will answer that purpose, but it should be prudently regulated, and its effects watched. Such is, in a few words, the best treatment you can use as addressed to the system generally in cases of gunshot wounds.

POSITION.

This question is not less important in gunshot injuries than it is in other wounds. The rule is, in fact, to prevent stagnation of purulent matter, and favour its discharge towards the most depending parts. Purulent absorption is a source of infection from which we should sedulously seek to shield our patients. If, for instance, the wound be on the superior part of the head, we have three circumstances to attend to in order to remedy the disadvantage resulting from the wound not being in a depending part of the same. We must either so place the patient that the direction of the wound may be altered, or apply dressings which will effect a compression upon the

latter from below upwards, so that the pus may not remain stagnant at the bottom of it and there accumulate; or we must finally make a counter-opening. You have seen me use this latter expedient a short time ago; the patient had been wounded by a sabre cut on the left parietal bone; now, as the opening of the wound was towards the vertex, the purulent matter could not discharge easily; I remedied this by making a counter-opening on a level with the fundus of the wound. The danger of penetrating wounds of the chest, independently of the lesion inflicted upon the viscera, lies principally in the accumulation of the fluids towards the lower part of the wound; these remain stagnant, give rise to burrowing and sinuses, and no position which we may cause our patient to assume will effectually cause their discharge.

These dangers exist in a lesser degree with penetrating wounds of the abdomen, because a peculiar kind of decubitus, and a well-regulated system of compression, will be sufficient to cause the effused liquid and the purulent matter to be discharged by the opening of the wound. But you should pay particular attention to the manner of placing wounded limbs. No general rule can here be given, for the position of the injured member must be regulated by the different periods the wound has to go through. Let us first suppose that you have to deal with some phlegmonous inflammation which has not yet reached suppuration; the limb, in such a case, is usually kept elevated, and this position is the most likely to bring on resolution. But if purulent matter have already formed, we must adopt another course; the elevated position would then be dangerous, for sinuses towards the upper part of the limb would certainly form; and to avoid this the dependent posture is generallya dvised. The very same principles hold with gunshot wounds. The extremity of the wounded limb is to be raised within the first and second periods, but as soon as suppuration has taken place the limb should at once be made to assume a dependent position, so as to prevent the purulent matter from running towards the upper part of the same. The raised position of the limb is, in gunshot wounds, of very trifling utility, whereas it may, on the other hand, be fraught with very serious inconvenience. The advantages of it are, in fact, to diminish inflammation, but you know that the latter is not the event we apprehend most in these kinds of wounds, so that we should at once inquire what may be the dangers of this raised position of the limb? These are no less than burrowing of matter and subsequent purulent infiltration; and this is just what is most to be dreaded in gunshot wounds. Of this fact you have clinical proofs before you; you need but observe some of the cases which have lately been brought in. Notice, for instance, what takes place in wounds of the knee: this joint, when the dorsal decubitus is assumed, is almost always on a higher plane than the hip. What is the result? Stagnation of fluids within the wound. This circumstance contributes certainly very much in rendering wounds of the knee-joint so perilous. Do not believe, gentlemen, that the danger of keeping limbs in a raised position is confined to the untoward results which I have been describing; it may give rise to other very unpleasant consequences. Suppose, for instance, that the surgeon, in order to meet certain ends he has in view, keeps both legs raised; what will be the consequence? Why

the circulation will be greatly modified in these limbs; the amount of blood sent to them will be lessened, but in other regions it will, of course, be much increased; and hence we may have congestion of the liver, kidneys, lungs, brain, &c. We should, therefore, prescribe the raised position of the limb with great caution, and be careful to remember that this elevation of the same may, in gunshot wounds, be more prejudicial than advantageous.

TOPICAL APPLICATIONS AND METHODS OF DRESSING.

The annals of surgery present many different modes of dressing gunshot wounds. There was a time, indeed, when they used to be burned with gunpowder, in order to destroy all the external layers which were then thought poisoned. Some burned the wounds with a red-hot iron, and others applied boiling oil to them. Ambrose Paré, who lived at a period when civil war was raging, paid much attention to these kinds of wounds. His practice was to make immediate applications of hot oil. He tells us that the quantity of oil was one day insufficient to dress all the wounded, and he was obliged to use ointment for some of them. When he returned home he was very uneasy about these poor fellows, and he very forcibly describes the anguish he experienced the whole night, and the hurry and apprehension with which he hastened to see them next day. But how greatly astonished he was to find them doing tolerably well! He forthwith gave up the boiling oil, and it is rather humbling to confess that mere chance caused such a barbarous practice to be given up. From that time, ointments, plugging, tents, and setons, were successively used; and I beg you to notice that the last of these contrivances is not quite so unreasonable as has been represented. This can easily be shown. Gunshot wounds are generally winding and irregular, and this is owing to two circumstances,—the ball may have been made to deviate, on account of the different density of the tissues through which it has run; or the organic layers which have been displaced by the passage of the ball have resumed their position to an extent varying with their respective elasticity. It is evident that the windings of the wound will be a hinderance to the free escape of the pus; whilst a seton, which completely and regularly runs through this wound, will effectually favour the discharge, and prevent stagnation. The use of the seton has, however, been discontinued, in spite of the palpable advantages to be derived from it, because it is very apt, by acting as a foreign body, to give rise to very dangerous inflammation.

Cold applications.—Cold water or ice has long been in repute as a topic in the treatment of all wounds, and especially in gunshot injuries. We find, in a thesis of M. Madelin, published in 1825, proofs that this practice is very ancient. The use of cold water as an application to gunshot wounds has been especially recommended by Schmuck, a Prussian surgeon of the last century, as well as by Lombard, a French practitioner, who served in the wars of the Republic. This feature in the treatment of gunshot injuries had been quite given up, when it was revived in France, about twenty years ago, by M. Josse, a surgeon of Amiens, who advocated it very strenuously. It is alleged that cold applications prevent inflammation and pain; that they in

some degree do away with suppuration, and hasten cicatrization. They have been used in different ways. Some use continuous irrigation; others, for the sake of convenience, merely apply sponges or lint, dipped in cold water, as recommended by M. Mayor, of Lausanne, seeing that these applications be kept moist. Others, again, use bladders, filled either with cold water or ice. If it be conceded that the steady application of cold has real advantages, preference should be given to continuous irrigation, which of course will pretty constantly stand at the same temperature, and not present so many thermometric variations as when ice or lint, dipped in cold water, is used. But this continuous irrigation, it should be noticed, is rather difficult of accomplishment, and not easily kept up at an identical temperature. I have never been an advocate of continuous cold; still I have used it, and have carefully observed the cases where it was applied by others, and I will lay before you the conclusions to which I have come, as well as the reasons upon which I found them.

A continuous stream of cold water kept up steadily on a phlegmonous inflammation which has not suppurated as yet, may certainly contribute to resolution; but it cannot be denied that compression, leeches, cupping, mercurial frictions, or blisters, applied for a short time, may likewise act very beneficially on this same inflammation; all of which means are far easier of application than continuous cold of a non-varying temperature. If the wound we have to treat is an incised one, the only thing we have to do is to bring both lips in contact, and see that they remain so, in order to favour union by first intention. If, in such a case, either cold water or ice were used, they would be very likely to cause mortification of the textures, and this result I have seen several times in wounds connected with large flaps, which latter, far from uniting, were invariably attacked by gangrene; so that I may safely assert that refrigerating applications on incised wounds are, to say the least of them, useless, and often very hurtful. In contused wounds we have two circumstances to take into consideration. First, we are to make out which are the mortified parts (which of course will be cut off), and, secondly, which textures are likely to be saved. In order that the sloughs may be removed, there must of necessity spring up an eliminating inflammation, and the only thing we have to do is to moderate it. But it is alleged that cold water *does* diminish that inflammation. There is no doubt that redness and swelling give way under the influence of cold; but the inflammation itself, lying below the surface, is rather concealed than arrested by this practice. Suppuration very often assumes an unsatisfactory character under the agency of cold water, and is likely to burrow under the fasciæ, and to get extensively diffused. But, moreover, who would venture to say that the application of cold does no further harm than the casualties which I have stated? Is it not a well-kown fact that most phlegmasiæ acknowledge cold, and especially cold and damp, as their primary cause? May it not fairly be asked whether there is not some danger in causing a patient to hold his limb in cold water for several consecutive days and nights? Does he not thereby run the risk of being attacked by pneumonia, bronchitis, pleuritis, or rheumatism, which affections are all much more

dangerous than the wound we are trying to heal? I leave you to consider these questions; as for myself, I have to state that the reasons I have laid before you have appeared to warrant the rejection of refrigerating applications.

SECONDARY HEMORRHAGE.

Secondary hemorrhage, in gunshot wounds, differs widely from the same accident caused by the rupture of an aneurism or by an ordinary wound; for in gunshot injuries the gush of blood results from the falling off of the clot which had been plugging up the wounded artery. This clot, by interrupting the course of the blood in the injured vessel, naturally produces, on the re-establishment of the circulation, great dilatation of the collateral branches; and it is evident that hemorrhage, by means of these same branches, would take place almost immediately, if you were to be satisfied with tying the artery between the heart and the wound. This return of the hemorrhage is principally to be dreaded in wounds of the head, even when a large arterial trunk has been secured, on account of the numerous anastomoses of the carotids, both with each other and the vertebral arteries. The patient who lay at No. 26 has afforded us a very sad example of this fact; he had had, as you are aware, his lower jaw fractured by a ball, which had issued on the upper part of the neck. Very alarming secondary hemorrhage took place after the receipt of the injury; the blood gushed both from the mouth and the two apertures of the wound, and, in spite of all our efforts, we did not succeed in arresting it. It was then I made up my mind to tie the corresponding carotid: what was the result? On the very evening of this operation hemorrhage occurred on two different times, and with as much violence as before the carotid was secured. When I saw the patient next morning, he was nearly exhausted, but the hemorrhage had stopped; a few hours afterwards, however, it returned again, and this time it proved fatal. Thus you see, that the tying of the wounded artery may prove powerless in secondary hemorrhage resulting from a gunshot wound. What then, are we to do in such unfortunate cases? Shall we apply powerful compression above and below the wound? This may decidedly do much good; and if it were impracticable, there would be nothing left but tying both ends of the injured artery within the wound. But even this last resource, however efficacious it may appear at first sight, is far from placing the patient's life entirely out of danger; for the coats of the artery, in the very spot where the ligature is to be applied, are not in a favorable state, on account of the injury inflicted by the wound; and the morbid alterations which have taken place in the textures of the vessel might therefore give rise to another rupture, and to renewed hemorrhage. So that we must conclude, from the consideration of these facts, that secondary hemorrhage in gunshot wounds is often beyond the reach of our art.

PURULENT INFECTION.

All severe wounds, whatever their nature may be, give rise to a general reaction. This may be divided into two distinct kinds. 1st. The inflammatory, or febrile reaction, which is characterised by phenomena so well known, that I need not describe them here. 2d. A

reaction of a purulent or infectious nature. To this latter I beg you will direct your attention for a few moments. Of all wounds, those inflicted by balls are the most likely to expose the patient to absorption of purulent matter, and to the subsequent infection of the system. The surfaces of ordinary wounds are but rarely mortified; it is often an easy matter to bring the margins into contact and make them unite by first intention; whilst suppuration may be very limited, or sometimes not take place at all. In gunshot wounds, on the contrary, immediate union is impossible; the tissues over the whole periphery of the wound are mortified, must turn into slough, and be thrown off by suppuration; it is, under such circumstances, very likely that the economy will, to a certain extent, suffer from a kind of poisoning or infection, by the agency of the undetached sloughs, the elimination of which does not take place before the tenth or fifteenth day. Gunshot wounds are, moreover, mostly unequal and anfractuous, so that the pus accumulates in them, forms sinuses, and is discharged with great difficulty. The stagnation of the pus, and the prolonged contact of eschars and putrid purulent matter, is a double cause of infection, which sufficiently explains the frequency of purulent contamination consecutive to gunshot wounds. This poisoning or infection, as resulting from the passage into the circulation of putrid substances, is always of a very serious character; it is, in fact, the most fearful among the secondary complications of gunshot wounds; it is likewise one of the most frequent; and we have, unfortunately, several cases of it in the house. Several categories or forms of infection might be established, by taking into consideration either the exciting causes of the same, or the lesions which it gives rise to. Thus may purulent infection result from a wound or ulcer which communicates with the external air, or from an abscess which has no communication externally, as happens with congestive abscesses; or it may arise from extensive and diffuse suppuration, which spreads among the muscles, and gets infiltrated through the whole extent of a limb. The lesions, on the other hand, which follow purulent infection, may affect the viscera and the splanchnic cavities; in such cases, numerous abscesses in the liver, spleen, or lungs are discovered after death: this form of infection is always fatal. Or the abscesses may not form in the viscera and cavities, but fix exclusively upon the limbs and articulations: this form is less dangerous than the preceding, and patients may recover, provided the abscesses be not too numerous or too extensive, and they do not occupy the very thickness of the limbs, as sometimes happens with the thigh. Or, finally, the purulent collections may occupy the splanchnic cavities, the viscera contained in them, the articulations, and the different tissues which compose the limb.

Purulent infection, resulting from gunshot wounds, generally comes on from the tenth to the thirtieth day. It is ushered in by rigours which, after a while, become more and more frequent, and is characterised by a frequent, small, and thready pulse, a feeling of excessive prostration, and by complete adynamia; so that the fever resulting from this infection might very well be called putrid or adynamic. The skin assumes a yellow hue, and is moistened by a cold and viscous

perspiration; the patient exhibits an almost continual tremor, gets comatose, and dies. The wound, from the very beginning of this series of phenomena, looks pale, the suppuration diminishes, and the purulent matter gets gradually thin and serous. In those cases where there is a likelihood of recovery, a reaction takes place, the pulse resumes some vigour, and becomes less tremulous. The only thing to be done in these latter cases is to open successively all the abscesses which may have formed in the parietes of the trunk, or in the textures of the limbs.

HOSPITAL GANGRENE.

Hospital gangrene is a singular complication, which has not yet received a befitting name; it is, in fact, a sort of humid gangrene. The aspect of gunshot wounds, attacked by it, undergoes an immediate alteration; they, namely, turn of an ashy gray, just as if a layer of foreign substance had been spread over their surface. The pus at the same time loses its usual characters, becomes transformed into a sanious and very scanty fluid, and the phenomena progress so rapidly, that we rarely have an opportunity of witnessing the very outset of them. Hospital gangrene is sometimes epidemic and sometimes sporadic. The French surgeons who have studied the disease most carefully are Poutot and Dussossois. Blackadder, an English surgeon, has recorded an epidemic of it which he saw in Spain. He thinks that it begins by a grayish, semi-transparent vesicle, which breaks, communicates with others, and thus forms a layer which invades the whole wound. A wound attacked by hospital gangrene, in whatever way the latter may have begun, assumes immediately a grayish colour; a pultaceous matter of the same hue, and of a very offensive smell, oozes from it; the stump or the margins of the wound get puffed up and feel pulpy and boggy, and become very painful and throbbing. The reaction is sometimes very violent, the pulse is frequent, irregular, almost always very feeble; and the patient falls into a profound state of prostration and adynamia. All these phenomena occur in the space of twenty-four hours. The disease then progresses rapidly, and runs through all its stages in a week or ten days. The putrid gangrene spreads both in surface and depth, soon reaches the bones, which it destroys and necroses, and proves rapidly fatal. In very favorable cases it extends but superficially, and thus spreads gradually along the textures without gaining in depth; it transforms the integuments into putrid sloughs, which soon get limited by a red circle, from which the eliminating process begins. Hospital gangrene is mostly epidemic, but it is sometimes sporadic. The causes of this dreadful visitation are not well known; still it has been attributed to crowding, want of cleanliness, to wretched habitations, to the absence of hygienic precautions and medical care; but none of these causes can explain its appearance upon our two patients. The first case is a young woman, of very cleanly habits, who has had her breast amputated; and the wound was nearly cicatrized when the hospital gangrene made its appearance. Now the ward where this patient is lying is large and well ventilated; two wounded persons only have been admitted into it, and it contains several vacant beds, so that crowding is out of the

question. The second case is a man. This patient had had his leg amputated just above the ankle about a week ago; the amputation had been necessitated by a comminutive fracture of the tarsus, that had been struck by a ball, which had run through the foot. This man was, as well as the woman I mentioned just now, in a very satisfactory state in every possible respect; so that it must be confessed that these two cases present us with additional proof of the obscurity which still reigns over the causes of hospital gangrene.

Most surgeons admit that this sad complication is contagious: among them I may name Poutot, Dussossois, and Blackadder; and as for myself, I fully agree with them in this particular. But admitting, however, that hospital gangrene is contagious, like syphilis or small-pox, it might fairly be asked, what was the cause of it with the first man who was ever affected by the disease? This is a question of general etiology, which concerns all contagious diseases, and which we are not able to solve. Still I fully believe that hospital gangrene is contagious, and that it is communicated by actual contact. It has been known to arise in a wounded individual the very next day after his wound had been touched with a sponge or part of the dressings which had been used for another patient affected with the disease. Those surgeons who maintain that hospital gangrene is not contagious but epidemic, ground their opinion upon the fact of its breaking out upon several wounded patients in the same hospital, and at the same time; but there is an experiment which clearly shows the contagious nature of the disease. Place upon a wound, in a fair way of cicatrization, a little of the matter secreted by another wound affected with hospital gangrene, you will see the aspect of the first wound change in a few hours, and soon exhibit all the phenomena of this dreadful complication. Now, if we admit the doctrine of contagion, we are met by another and a very interesting question. What is, namely, this contagious principle? Of what nature is it? This has been answered in a variety of ways. Some have thought that it consists of an acrid principle in a state of fermentation. Others maintain that the contagious principle belongs to the organic world. This latter theory was propounded in 1814. But what is this organic principle? As for myself, I am rather inclined to think that the contagious principle of hospital gangrene is composed of certain microscopic animalculi. We are surrounded by innumerable quantities of little beings, of which we can become cognizant but by the aid of the microscope; myriads of them swarm in every part of the creation! Are we, then, to be surprised that they should settle upon any part of our frame with morbid tendencies? The physical as well as the moral world offers a picture of a continued struggle between good and evil, between the great and the small. Only look at the cancerous molecule which is deposited in the very core of our organs; it is at first a mere atom, hardly cognizable to the senses, but this atom gradually enlarges, destroys all tissues it comes in contact with, and substitutes itself for the parts which it has annihilated. Only look at the worms which spring up in a mysterious manner on the surface of a corpse, and which multiply, *ad infinitum*, by the destruction of the inanimate fabric! Why should matters proceed otherwise with hospital gangrene? Why should we

not believe that the pultaceous and putrid matter, which is thickly deposited on the surface of wounds, without any preliminary or concomitant inflammation, is formed by an agglomeration of microscopic animalcules? There is an unknown agent at work here which has yet to be discovered; but whatever be its nature—whether it belong to the vegetable or animal kingdom—it is decidedly a manifestation of the great law by which we everywhere see the elementary principles contending with each other, and life struggling with death.

The prognosis of hospital gangrene is very unfavorable, for it disorganizes everything it touches, and the disorganization which it produces is so rapid, that it would be mortal if a well-directed treatment were not opposed to its destructive inroads. It should be attacked by topical applications, for it is at first a strictly local affection. Several among these have been highly extolled. Thus have charcoal and Peruvian bark, finely powdered together, as well as the vegetable and mineral acids, been much recommended. In certain cases, however, the disease goes on spreading with great rapidity, and destroys the patient, in spite of the most energetic treatment. The therapeutical means to which I give the preference are the vegetable acids, which I think more efficacious than the powder of bark and charcoal, and more to be depended on than even alum. Among these acids I generally use the citric, the doses being regulated by the greater or lesser hazard of the case. Thus I prescribed for the patient lying at No. 49, compresses dipped in the following lotion—citric acid, two drachms and a half; water, one ounce. This application has had the most beneficial effect; the whole of the morbidly altered parts are detached and thrown off, and the wound has assumed a reddish and vitalized aspect. The woman, whom I mentioned as being likewise attacked with hospital gangrene, is progressing just as satisfactorily. If the means which were here employed had had no effect, I would have cauterized the whole of the wound with the acid nitrate of mercury, as Dupuytren used to do; and I do not hesitate in using the actual cautery, when I find the grayish, pultaceous layer to be very thick. These different local applications should be aided by a general tonic treatment. Amputation is to be resorted to only in those cases where all the preceding means have proved unavailing in arresting the progress of the disease.

PHLEGMONOUS INFLAMMATION AND SINUSES.

As gunshot injuries are generally deeper than other wounds, so are they more frequently followed by inflammation reaching to a great depth, and by burrowing of matter and sinuses. The inflammation which is consecutive to gunshot wounds is of two kinds: it may, first, be limited to the track of the ball, and it is then not only devoid of danger, but quite necessary; and it may, in the second place, extend to the neighbouring parts. If the wound reach no deeper than the aponeuroses, the phlegmonous inflammation resulting from it will not extend any further; it will then be strictly superficial, and spread more or less, according as the textures where it is situated have more or less laxity. But if the wound run right through a limb, the phlegmonous inflammation will involve the intermuscular septa, will extend

between the muscles, run up to their very origin, lay the bones bare, and bring caries or necrosis upon them. If this inflammation occupy the whole extent and depth of a limb, it will generally prove fatal. These deep and diffuse inflammations are among the most frequent and most dangerous complications of gunshot wounds. They put the life of the patient in great peril—first, by the general reaction which they bring on, and which is sometimes sufficient to carry off the wounded individual; second, by the suppuration which they cause, the great amount of which rapidly exhausts the organism; third, by the propagation of the inflammation, which may extend to the veins and lymphatics, and bring on purulent absorption and deposits; fourth, by producing necroses of bones, and exposing the patients to their excision, or to amputation; fifth, by rendering (in cases of recovery) the least movements difficult and painful, in destroying the laxity and free play of muscular aponeuroses and synovial bursæ, by glueing all these parts together.

Such are the principal secondary complications of gunshot wounds. They conclude the general observations which I had to offer on the gravity and treatment of gunshot wounds, which the events that have just taken place have allowed you to study and to follow in all the varieties and stages which they can present. Vide *Report on Surgery*.

Art. 47.—*The Treatment of Erysipelas with Nitrate of Silver Ointment.*—M. Jobert states that he has obtained better results from the application of nitrate of silver with axungia, than from any other application in the treatment of erysipelas. Numerous cases are mentioned of the severer form of erysipelas having been treated in this manner in the Hôpital St. Louis, where the disease is very prevalent; and with invariable success. Four degrees of strength are employed, varying from two drachms of nitrate of silver to an ounce of axungia. to equal parts of the ointment and caustic. The ointment is applied twice a day, and after each application a thin layer is left on the affected surface, taking care that the entire inflamed surface and a short way beyond it are covered with it.

Gazette des Hôpitaux, May 11, 1848.

Art. 48.—*On the Prevention and Treatment of Bed-sores.* By M. C. Bernard, M.B.

(Condensed from *The Dublin Medical Press*, May 10, 1848.)

1. *Prevention of bed-sores.*—It is well known to every practitioner that, although the most timely precautions may be adopted, and the most skilful means directed towards their prevention, yet they will, in opposition to every exertion, make their appearance. We may succeed often by stimulating applications and other auxiliaries to interrupt their progress; yet so low are the powers of life in some cases, and so great the loss of nervous energy, that the parts subjected to pressure quickly fall into a state of sphacelus. To such an extent was this tendency manifested in one case which I had lately under my care, that not only the integuments and subjacent cellular tissue over the sacrum, spinal processes, and hips, sloughed, but even those parts of the body

which come occasionally in contact (as the knees, &c.) were affected in like manner. To avert so great a calamity we must call to our assistance every available remedy. As a matter of the first importance we should be satisfied that the nurse in attendance on our patient has sufficient experience; as without proper attention on her part, and implicit obedience to the physician's directions, his best efforts will be frustrated. In protracted fevers the physician should not even depend on the nurse's watchfulness; he should make it a rule to examine daily those parts subjected to pressure.

When the first blush of unhealthy inflammation makes its appearance (which is indicated by a livid colour in the integuments) we should take care that all pressure from the parts be immediately removed. This can be done either by the patient's position being changed, or by the aid of bolsters or air-cushions; and if the case is one likely to be protracted, the hydrostatic bed of Arnott should be at once procured. The simple plan recommended by M. Purefoi (as lately described in the Gazette Médicale) is well worthy of the attention of the profession. He uses a cow's bladder softened in warm water, this being oiled, and partly inflated, is placed under the part suffering from continued pressure. The effect of this support (in a case of fractured leg) exceeded his expectations. He says, "from the moment the patient experienced the change, he cried out that he was in heaven, and to the end of the cure of the fracture he felt no more pain, nor was the bladder changed but once during the month this was effecting. Another patient, who had gangrene from infiltration of urine, had to rest almost entirely on the sacrum for two months, and was saved any pain or ulcerations of the part by having placed under it a bladder, prepared as above, and wrapped in a towel." What renders this contrivance valuable is its simplicity and cheapness; it forms a very manageable substitute for the hydrostatic bed of Arnott, and will, I am convinced, add more to the comfort of our patients than a more costly article.

In addition to these preventives, others to stimulate the surface and excite the dormant capillaries to more healthy action, should be diligently used. The lotion recommended by Sir B. Brodie is admirable for this purpose. It consists of two grains of bichloride of mercury to an ounce of proof spirit. These two contrivances, if used at the same time, will be found invaluable in the prevention of bed-sores. The lotion of Sir B. Brodie, by its stimulating properties, will serve to thicken the cuticle and render it more efficient to resist injury; whilst the inflated bladder of M. Purefoi, by its softness and elasticity, will preserve an uniform pressure on the surrounding parts, and allow the free circulation of blood through the capillaries at the surface of the body.

2. *The treatment of bed-sores.*—The constitutional treatment is of the first importance in these cases; indeed any local application to the sores will prove of little use, unless we support the strength and give tone to the nervous system. In order to understand what constitutional treatment will best suit our patient, let us inquire into the general symptoms of such cases. We find them almost invariably in a state of exhaustion and extreme emaciation, the powers of life having

sunk almost to the lowest ebb; the pulse quick and weak; the tongue furred or morbidly clean; the skin rough and dry; the nights are passed in a sleepless state from the pain and irritation of the sores; every motion of the patient is accompanied by the most excruciating torture; in fact, it is difficult to depict the misery which an individual suffers who is subjected to so great a misfortune. During this period the appetite is often voracious, but, strange to say, the food digested seems to impart little strength to the attenuated body.

In our treatment, therefore, we must not forget the irritative fever which exists, and the loss of nervous energy which attends this affection, to allay the one and restore the other. I look upon the exhibition of powerful sedatives as a *sine qua non* in the treatment. Dr. Graves, in his observations on this subject (published in the thirteenth lecture of his System of Clinical Medicine), recommends anodynes at bedtime. The pain and nervous irritation are, however, so great in many cases, more particularly during the second stage of these sores, that the greatest benefit will be derived from their exhibition at intervals during the day as well as at night. For this purpose I have been in the habit of prescribing, with the greatest benefit, one or two grains of the muriate or acetate of morphia, combined with Murray's fluid camphor at bedtime, and smaller doses during the day, whenever the pain would urgently demand its exhibition. Sulphate of quinine, or some other preparation of bark, ought also to be administered. When constipation exists, enemata with lukewarm water will prove to be the best aperient, as our object is to husband as much as possible the strength of the individual. A light and nutritious diet is best suited to such cases. Brandy or wine should also be given at intervals during the day, and in quantity according to the necessity of the case.

When the sores have made some progress towards healing, change of air may be ordered; gentle exercise in the open air, if at all practicable, will be also attended with the happiest results. An hydrostatic chair might easily be constructed of the same shape and construction as the bath-chairs in ordinary use. It is only necessary that the seat and back of the chair may be rendered waterproof. This can be accomplished by lining it with Mackintosh cloth, and filling the cavity with water after the manner of the hydrostatic bed of Arnott: whilst daily exercise in this chair will tend greatly to strengthen the constitution, and add to our patient's comfort and enjoyment, it cannot in any way protract the healing of the sores.

Local treatment.—The remedies should be varied according to the different stages of the sores. For practical convenience, we may divide the progress of these ulcers towards reparation into three stages. In the first, we have a deep slough, analogous in some respects to the eschar artificially produced by caustic potash; this slough (according to the powers of the constitution) will take two or three weeks to be cast off. Whilst this process is taking place, we should rather assist than interfere with the salutary efforts of nature. Stimulating applications will now be found most useful. A carrot-poultice should be applied every morning and evening. A solution of chloride of soda may also be sprinkled on the poultice to decompose offensive effluvia.

The patient should be enjoined to lie on the face to take off pressure from the sores; if this is not practicable, bolsters, air-cushions, or bladders, inflated and oiled, must be used with a similar intent.

When the slough falls out, a deep unhealthy-looking ulcer is presented to our notice, forming the second stage of these sores. This ulcer is generally round or oval. The integuments at the circumference are undermined, so that you can readily pass a spatula beneath them, showing that the subjacent cellular tissue had lost its vitality even to a greater extent than the cuticle. The margin of the ulcer is consequently found to overlap its base. The base presents a flabby, uneven surface without granulations, and interspersed with shreds of adherent slough. From this surface a thin sero-sanguineous or ichorous discharge is secreted, having a most fetid odour. In order to promote healthy granulation, and stimulate the parts to cast off the remaining shreds of slough, warm dressings, consisting either of equal parts of gum elemi and spirits of turpentine, or of castor oil and Peruvian balsam, may be applied, dipped in lint, to the bottom of the ulcer, and a linseed-meal poultice, spongio-piline, or a carrot-poultice, placed over them. After a few days the ulcer will assume a more florid appearance, and show a disposition to form granulations. It will now be necessary to make a change in the dressings. At this particular stage we may hear of many vaunted remedies and old woman's cures spoken of as specifics, consisting of ointments that take twenty days to make, lotions, and poultices innumerable. Suffice it to say, that the simple means I have used at this stage have answered all my expectations, and have added more to my patient's comfort than all the greasy applications which are recommended for the same purpose. It consists in applying every morning, with a camel's hair brush, a solution of nitrate of silver (ten grains to an ounce of distilled water) to the flabby granulations, then covering the surface of the ulcer, and filling it up with fine carded cotton. A piece of oiled silk, large enough to cover both hips and sacrum, should then be placed over the dressings. The oil-silk thus applied serves a double purpose: it will, by preventing the evaporation of the discharge, keep the cotton soft, and permit its easy removal at each dressing; it will also add to the cleanliness and comfort of our patient, by preventing the bedclothes being soiled. Under this simple treatment, the surface of the ulcer soon begins to assume a more healthy appearance, the granulations at the margin become amalgamated with those at the base, until the cavity is filled up by luxuriant granulations.

We have now the third stage of these bed-sores to treat. As in the second stage our object was to stimulate the surface to healthy action, in this we have to control inordinate action and repress luxuriant granulations. A concentrated solution of sulphate of copper (applied every morning) will be found most useful for this purpose. The carded cotton and oil-silk, as above recommended, may be also continued until the ulcer is perfectly healed.

Art. 49.—*Collodion, a newly-discovered Adhesive Fluid, a Substitute for Sutures and Adhesive Straps.*

(From *The American Journal of the Medical Sciences*, April 1848.)

We have been shown by a young medical student, Mr. Geo. P. Maynard, of Boston, a liquid adhesive substance, which he has introduced as a substitute for the common adhesive plaster, and over which it seems to us to possess many advantages, and to be applicable to many cases in which the latter is not. It is formed by treating cotton with nitric and sulphuric acid, then washing the substance thoroughly, and afterwards dissolving it in pure sulphuric ether.

In a letter to Dr. John D. Fisher, read before the Boston Society, Mr. Maynard states that he has used the adhesive liquid, and seen it used by his preceptor, Dr. Whitney, in more than one hundred cases of surgery, some of them serious, and in all successfully.

The mode in which it was used in these cases varied according to the nature, size, and situation of the wound. In slight cuts, a moderately thick coating of the solution laid over the incised parts was, on becoming dry, sufficient to keep the lips of the wound in position till union took place; but in most instances it was applied in conjunction with straps of cotton and sheep-skin, and with raw cotton, forming with them strong, unyielding, adhesive straps, bandages, and encasements; and, after many experiments, I am convinced that this is the best and most effectual way in which it can be employed as an adhesive agent in surgery. The solution dries rapidly, and in a few seconds, by the evaporation of the ether it contains, it becomes solid and impermeable to water; and a strap moistened with it and glued to any part of the cutaneous surfaces, adheres to it with a tenacity truly surprising.

In proof of this, I will mention the following facts: a strap of sheep-skin, glued to the hand by a thin layer of the solution, nine lines long and one and a half wide, sustained a weight of two pounds. A second strap attached to the hand by a layer of the substance, nine lines in length and three in width, sustained a weight of three pounds. A third strap, fixed to the hand by a layer of the liquid, twelve lines square, resisted the force of ten pounds without giving way; and a fourth strap of the leather, glued to the hand by a stratum of the solution, measuring one and three-fourths of an inch in length, and one in width, was not separated from its attachment by the gravity of twenty pounds. These statements may appear incredible; but they are founded on exact and carefully performed experiments, and are true. No other gum possesses such adhesive power as these experiments show this cotton gum to be endowed with. No adhesive plaster hitherto used in surgery is to be compared with it in this respect. It, therefore, can be made use of in cases in which the common adhesive plaster would be useless.

The wonderful adhesive properties which my experiments proved it to possess suggested the thought that it might answer the purpose of sutures in surgery. And an opportunity soon occurred to enable me to decide the fact that it would. I allude to the operation performed by Dr. Whitney, for the removal of a wen from the head. Fearing

that an erysipelatous inflammation might arise in the scalp, in case he united the divided parts by sutures, Dr. Whitney shaved the hair from the raised scalp, and, by means of the cotton solution, he glued some short and narrow straps of sheepskin on each flap, a short distance from their edge. These straps were then drawn towards each other, until the edges of the wound were brought into close and exact union, and the free ends of the straps were fastened together by sutures. In this case the needle and thread were passed through *inanimate leather*, instead of *living flesh*, causing no pain to the patient, and no interruption to the process of healing. The wound healed favorably, and without the usual accidents necessarily occasioned by the presence of sutures in, and the operation for their removal from, the parts. The happy result of this case convinced me that a means was now discovered which would enable the surgeon to do away with sutures, pins, and needles, in most of the cases in which these are at present considered indispensable.

Although unauthorised to do so, I must take the liberty, in this place, to mention the interesting fact that Dr. Comstock, of Wrentham, has recently employed this liquid as a dressing, in a case of extensive laceration of the perinæum, with a success that he thinks never attended any other mode of management. The dressings remained firmly attached and solid during the process of healing, notwithstanding they were for a time almost constantly covered by urine and mucus, and subject to being displaced by the movements of the patient.

[Mr. Bullock, of Conduit-street, manufactured some of this article at our suggestion. It is, at first, an opaline adhesive fluid, smelling strongly of ether, and becoming perfectly transparent by the deposit of a tenacious shreddy material on remaining at rest. The supernatant fluid retains the adhesive property; by spreading it over the skin with a camel's hair pencil the ethereal menstruum rapidly evaporates, and a transparent coating is left of greater or less thickness. When dry, it somewhat resembles goldbeater's skin, but is far more transparent. We have employed it in several cases of simple incised wounds with perfect success. Since the above extract was sent to press, we have made a novel application of this discovery for the cure of toothache and stopping decayed teeth. A piece of fine cotton, thoroughly soaked in the transparent fluid, and then inserted into the hollow of the tooth, previously cleansed and dried, has been followed by complete relief to the toothache, and has maintained its position for several weeks.—H. A.] Vide *Report on Surgery*, in the present Volume.]

Art. 50.—*New Mode of Resection of the Bones.*

By Le Chevalier Bernardinno Larghi.

(From the *Giornale delle Scienze Mediche di Torino.*)

The method proposed by the author consists in removing the osseous portion only, and preserving the periosteum, from which it is to be reproduced. We know the importance of this reproduction, which never takes place in resections in which the bone and the membrane are removed together. This practice, without having been reduced to

a method, as the author wishes, has still been once tried with advantage by M. Blandin. This professor, having to remove a portion of the clavicle, carefully preserved the periosteum, and the portion of bone separated was rapidly reproduced. M. Larghi is wrong, then, in accusing surgeons in the mass of never having thought of the reproduction of the bone in their resections. The following is the operation which he recommends:

In the first place, we must injure the periosteum as little as possible, and confine ourselves to dividing it no further than is necessary to allow of the extraction of the osseous portion.

If the portion of bone to be separated is short, make a longitudinal incision parallel to the length of the bone to be divided; this incision should penetrate through the muscles to the osseous portion required to be taken out. The periosteum divided, detach it from the osseous portion, which is easy; for it is already in part done by the gelatinous liquid which nature has secreted for this very purpose; then pass a riband round the bone, with the aid of a flexible needle; then produce traction on the bone by means of this riband. The muscles inserted into the periosteum act on their side in a contrary way; and from this antagonism results the complete separation of the bone from its periosteum. We may facilitate this operation, if necessary, by injections of warm water. The osseous portion once isolated, we effect the resection. If the osseous portion to be extracted is long, the process we have described must be resorted to at each of its extremities. When these are isolated from the periosteum, their resection may be effected, and with a little force the whole of the osseous portion can be easily drawn away. Still it would be possible to extract a long bone by means of two small incisions made at its two extremities, which should penetrate from the skin to the bone, keeping intact not only the portion of periosteum comprised between the two incisions, but also the other parts, without even excepting the skin.

Dr. Larghi has several times applied this method with success in many patients, especially in the resection of a portion of the eighth and of the ninth rib, a great part of the right humerus, the ileum, and the forearm.

Nouvelle Encyclographie des Sciences Médicales, Feb. 1848.

Art. 51.—*On the Necessity of Excision in Cancer of the Lip.* By Charles Fluder, Esq.

(Condensed from a Letter in the *Medical Gazette*, May 26, 1848.)

The object is to direct attention to a most important fact, already perhaps known to many, but not duly acted on—the certain fatality of cancer of the lip, if left to its own course, or if treated in any other way than by excision; and the necessity of, and more especially the almost certain cure consequent on, that measure.

In the course of rather more than twenty years of practice, it has been my lot to observe very many of these cases; on the one hand proving what I fear cannot be said of scirrhus at other parts of the body, the real utility of excision; and, on the other hand, as clearly demonstrating the certain melancholy fatality consequent on reposing on other treatment, to the exclusion of the only real remedy, the knife.

The disease begins with some little wart or fissure, or abrasion, and it most commonly occurs on the lower lip. Before very long ulceration is perceivable, and induration, and the progress is much like scirrhus at other parts. One or two cases will be sufficient in illustration.

A few years ago a medical practitioner was on a visit to a gentleman in this country, on whose lip he one day accidentally observed a very small appearance of the sort above mentioned. He was told it had been there many weeks, and had not changed much in appearance, either for better or worse, notwithstanding various applications had been used. He advised excision, but others recommended the trial of various escharotics for several months; and beyond this, I believe, even still more delay occurred. At last, after an interval I imagine of nearly a year from the time that excision was first advised, the disorder becoming more formidable, it was decided in consultation that the time for an operation had passed, and the poor gentleman died a lingering and miserable death.

About seven or eight years ago a labouring man, resident in this neighbourhood, showed me a small ulcer in his lip, which he attributed to the adhesion of a tobacco pipe, while smoking. The ulcer had been there two or three months, and there was some hardness around it. He had applied leaves and ointment to it, without benefit, and lunar caustic had been used. I advised him to let me cut it out, but he declined. I met this man some six or seven months afterwards, when he again showed me his lip. The disease had increased, having become a hard tumour, about the size of a nutmeg, with an ulcerated surface. On this occasion I urged very strenuously the necessity of excision. He was unable to muster sufficient courage, and I again lost sight of him for some months. He then came a third time. I examined the poor man again; but the disease had extended too deeply. The submaxillary and sublingual glands were contaminated; the tongue itself was assuming a morbid appearance, and it was decided, by others as well as by myself, that an operation could be of no avail. This poor creature perished in the most horrible manner; not, however, until the deadly parasite had gnawed its way through the mouth to the pharynx and œsophagus.

On the other hand, I have around me many cases (and I know of many more) in which the operation has been performed ten, fifteen, and eighteen years ago; and though in all of these the operation was only had recourse to when there was no mistake as to the malignity of the disease, in none has it returned.

Whether the disease in question be or be not true scirrhus, is not a point for me to determine. One thing to me is certain, that there is a disease of common occurrence in the lip, warty or ulcerative, with induration, trifling at first in its appearance, insidious in its progress, but fearfully fatal in its result; which, if treated by excision, rarely, perhaps never, returns—if otherwise, leads invariably to a painful death.

The operation is sufficiently simple. A triangle of lip must be taken out, the base of which triangle is formed by the surface of the lip, with the tumour or ulcer on it. The incisions are best made with a

bistoury, extending beyond the induration on each side of it, so that the apex of the triangle may be thoroughly clear of induration. A semicircular incision has been recommended around the induration, but this is not so good as the triangular operation. The wound is much longer, healing by granulation, and leaves a worse lip; indeed, it is astonishing how very little deformity or inconvenience arises after the triangular operation, two or three small sutures, strapping, and a light bandage being all that is required in the way of dressing.

An ulcer or wart, or tumour of the lip, of suspicious appearance, may be treated by caustics or escharotics for a short time; but if the disease gives evidence of increase instead of diminution, it is unjustifiable to delay excision until the adjacent textures are implicated, because of this exceedingly important fact—that what is malignant here, unlike malignant disease of other parts of the body, is at an early period entirely under the control of the knife. In short, that scirrhus at this part is capable not of extirpation only, but of extermination.

Art. 52.—*The Treatment of Venereal Diseases.*

(*Lancet*, June 24, 1848.)

Formulary of the Hôpital du Midi, as collected by the Reporter of M. Ricord's Lectures in the Summer of 1847.

NON-VIRULENT DISEASES.

1. *Injection for balano-posthitis.*—Make three injections a day between the glans and prepuce with the following fluid:—Distilled water, three ounces; nitrate of silver, two scruples.

2. *Abortive treatment of blennorrhagia.*—Make one injectinn only with the following liquid:—Distilled water, one ounce; nitrate of silver, fifteen grains. And take every day, in three doses, the following powder:—Cubebs, one ounce; alum, thirty grains.

3. *Injection for blennorrhagia when the period for the abortive treatment is passed.*—Make three injections daily with the following liquid:—Rose-water, six ounces and a half; sulphate of zinc, and acetate of lead, of each, fifteen grains.

4. *Internal treatment of blennorrhagia.*—Take one tablespoonful of the following emulsion three times a day:—Copaiba, syrup of tolu, and syrup of poppies, of each, one ounce; peppermint-water, two ounces; gum arabic, a sufficient quantity; orange flower-water, two drachms.

5. *Acute stage of blennorrhagia.*—Twenty leeches to the perinæum; bath after the leeches; refreshing drinks; rest in bed; low diet; suspensory bandage. Take one of the following pills four times a day:—Expressed and inspissated juice of lettuce (lactuca sativa), and camphor, of each, forty-five grains; make twenty pills.

6. *Gleet.*—Make every day three injections with the following liquid:—Rose water, and Roussillon wine, of each, six ounces; alum and tannin, of each, ten grains.

7. *Subacute epididymitis.*—Rub the testis twice a day with the following ointment:—Stronger mercurial ointment, and extract of bel-

ladonna, equal parts of each; a poultice to the part after the ointment, and rest.

8. *Acute epididymitis.*—Fifteen leeches to the perinæum, and the same number in the groin corresponding to the affected epididymis; bath after the leeches; barley-water for common drink: low diet, rest, and poultice.

9. *Chronic epididymitis.*—Apply Vigo's plaster to the testes, and wear a suspensory bandage. (Simple plaster, yellow wax, pitch, ammoniacum, bdellium, olibanum, mercury, turpentine, liquid styrax, and volatile oil of lavender, are the component parts of Vigo's plaster.—*Reporter of Lectures.*)

VIRULENT DISEASES.—PRIMARY SYMPTOMS.

CHANCRES.—10. *Abortive treatment of chancre.*—Within the first five days of the contagion, destroy the chancre with potassa fusa cum calce (pâte de Vienne).

11. *Regular non-indurated chancre.*—Frequent dressing with the aromatic wine,* extreme cleanliness, occasional light cauterization with the nitrate of silver. Rest, demulcent drinks; when there is inflammation, antiphlogistics, purgatives, and emollient applications. (N.B. No mercury.)

12. *Phagedænic chancre.*—Complete cauterization with the nitrate of silver, the liquid nitrate of mercury, the potassa cum calce, or the hot iron, according to circumstances. Afterwards lotions with aromatic wine, three ounces; extract of opium, three grains; or, aromatic wine, eight ounces; tannin, thirty grains; or, distilled water, three ounces; tartrate of iron and potash, four drachms; or, in the scrofulous diathesis, distilled water, three ounces; tincture of iodine, one drachm; or, sulphur ointments, and sulphurous baths. Internally—tartrate of iron and potash, one ounce; distilled water, eight ounces. One ounce three times a day.

13. *Indurated chancre.*—Three dressings a day with the following ointment:—Calomel, one drachm; axunge, one ounce. (N.B. Mercury is used internally for the *indurated* chancre: as to the mode of administration, see secondary syphilis, No. 21, as the metal is given in the same manner in both cases.)

BUBOES.—14. *Acute non-specific adenitis*, or *inflamed bubo.*—Twenty leeches on the tumour, emollient cataplasms, barley-water as ordinary drink, rest, broths. If fluctuation be detected, let out the purulent matter by a free incision.

15. *Abortive treatment of the bubo consecutive, by absorption of the virus, to the non-indurated chancre.*—Deep cauterization, of ten minutes' duration, with the potassa fusa cum calce, and await the fall of the eschar. (N.B. Analogous to the early destruction of chancre.)

16. *Bubo consecutive to the non-indurated chancre, which inevitably*

* Aromatic wine, (Parisian codex.) Aromatic species, (viz. the dried tops of the sage, balm, thyme, wild thyme, marjoram, hyssop, peppermint, wormwood,) two parts; vulnerary spirit, (viz., alcoholic distillation of anthyllis vulneraria, origanum, gnaphalium dioicum, arbutus uva ursi, and several others, known under the name of vulnerary flowers, and largely exported through Europe, by the Swiss, for popular purposes,) one part; red wine, sixteen parts. Macerate for a few days, then filter.

suppurates.—Use antiphlogistics according to circumstances, and then free the purulent matter by cauterization with potassa fusa; gradually destroy afterwards, by the use of caustics, the glandular mass which lies at the bottom of the open bubo. To the poultices used after cauterization may be added an ointment, of equal parts of extract of belladonna and mercurial ointment.

17. *Horse-shoe bubo and gangrene.*—Horse-shoe and phagedænic ulcers in the groin, resulting from a suppurating bubo, require the dressings mentioned in No. 12. Gangrene:—Chloride of lime, one ounce; distilled water, three ounces. This lotion is to be used several times a day. Or, powdered charcoal, powdered Peruvian bark, equal parts of each, to be thickly applied to the sore.

Preputial Complications.—18. *Phimosis.*—Inject between the glans and prepuce the aromatic wine with opium, as mentioned in No. 12, and use emollient and sedative applications; if gangrene be imminent, operate.

19. *Paraphimosis.*—Keep the organ raised, and surround it with cold compressers. Bland diet, refreshing drinks; endeavour to reduce or free the constriction by an incision, according to circumstances. After the strangulation is relieved, use emollient and antiseptic applications, combined with opium.

Scrofulous Complications.—20. Order every day the following emulsion in three equal doses:—Iodine, three grains; oil of sweet almonds, one ounce; gum arabic, a sufficiency; almond emulsion, three ounces.

SECONDARY SYPHILIS.

21. Order every day three tumblers of decoction of saponaria leaves, and put into each tumbler one tablespoonful of sirop de cuisinier, (N.B. Sirop de cuisinier: sarsaparilla, borage and white rose leaves, senna, aniseed, honey, and sugar;) and take every day one of the following pills:—Proto-iodide of mercury, inspissated juice of lactuca sativa, of each, forty-five grains; extract of opium, fifteen grains; extract of hemlock, one drachm and a half. Mix, and make sixty pills.

22. *Slight stomatitis.*—To gargle three times a day with the following liquid:—Decoction of lactuca sativa, five ounces; honey, one ounce and a half; alum, one drachm and a half.

23. *Mercurial stomatitis.*—To gargle three times a day with the following liquid:—Decoction of lactuca sativa, five ounces; honey, four drachms; hydrochloric acid, fifteen drops.

24. *Salivation.*—Order every day one drachm of flowers of sulphur, incorporated with honey. As a common beverage, the nitric acid lemonade. Gargle three times a day with decoction of lactuca sativa, five ounces; honey, four drachms; hydrochloric acid, fifteen drops.

25. *Mucous patches in the mouth.*—Gargle three times a day with decoction of hemlock, six ounces and a half; bichloride of mercury, three grains.

26. *Mucous tubercles around the anus* (*condylomata*).—Put twenty leeches to the perinæum. Take every evening a small enema of a decoction of poppy-heads, cold, and mixed with twenty drops of landa-

num. As an habitual beverage, take linseed-tea, sweetened with sugar-and-almond emulsion.

27. *Vegetations.*—Put twice a day on the vegetations the following powder :—Powdered savine, oxide of iron, calcined alum, of each one drachm.

TERTIARY SYPHILIS.

28.—Order one tumbler of decoction of saponaria three times a day. In each tumblerful put a tablespoonful of the following syrup :—Syrup of sarsaparilla, one pint; iodide of potassium, one ounce.

ART. 53.—*Enterotomy for the Relief of Obstructed Intestine from a Tumour at the Lower Extremity of the Sigmoid Flexure of the Colon.* By B. M. A. DIDOT.

(*Bull. de l'Acad. Roy. de Bélgique*, vol. vi, *and several British Journals.*)

The following is another successful example of the employment of M. Amussat's operation, the establishment of an artificial anus in the lumbar region for the relief of obstructed bowel.

A man, æt. 65, had suffered from great irregularity of the bowels for about four years, extreme constipation, varying with severe attacks of diarrhœa. For above a year these symptoms had been accompanied with a dull pain in the hypogastric region, which had latterly become more severe, and of a lancinating character, and no evacuations could be obtained but by the use of strong purgatives and enemata; and even by these means the quantity of feculent matter evacuated was very small. His sufferings at last became extreme; the abdomen was enormously distended; and, worn out by constitutional irritation and suffering, he was most anxious for relief by any means.

On introducing the finger as far as possible into the rectum, the obstruction was found to be caused by a hard tumour, of the size of a large billiard ball, situated about the lower extremity of the sigmoid flexure of the colon. As the perforation of the intestine above this point was the only chance of giving vent to the accumulated fæces, by which the colon was enormously distended, this operation was immediately recommended to the patient, and was performed in the following manner:

The patient being placed on his belly, an incision, three inches in length, was made transversely in the left lumbar region, half way between the crest of the ileum and the false ribs. After dividing the muscular layers and the fascia transversalis to an equal extent with the first incision, the back part of the colon, where it is not covered by peritonæum, was exposed.

Two needles were then made to transfix the intestine, each armed with a ligature, by means of which the intestine was gently drawn forwards towards the mouth of the wound, and a crucial incision, about an inch in length each way, made through the coats in the space between the ligatures. An enormous evacuation of fæces followed the first perforation of the intestine, and the cut edges of the bowel were drawn out by the ligatures through the wound, during the evacuation of the pent-up contents of the colon. The edges of the

intestine were then attached to the skin by five points of suture. A poultice was applied over the opening; and complete and immediate relief was obtained by the patient from his protracted sufferings.

The fæces continued to be evacuated freely by the artificial opening; and eighteen days after the operation a small quantity was evacuated by the natural exit. Some days afterwards blood and purulent matter were evacuated by the anus; and on examination with the finger in the rectum, the tumour was found to be ulcerated in several points. Two months after the operation the patient is stated to have improved so much in health as to be able to move about with comfort, and to have gained flesh.

No further mention, however, is made of the state of the artificial anus or of the progress of the disease. The case is important, as showing the relief and prolongation of life which may be obtained from the performance of this operation. M. Amussat is said to have adopted this proceeding in eleven cases, in all of which similar good results to these here mentioned have been obtained.

Art. 54.—*Removal of a Foreign Body from the Duct of Wharton.* By Dr. H. F. Campbell.

(*The Southern American Medical Journal.*)

A nurse, æt. 14, while engaged at work, with a pin in her mouth, felt pain under the tongue, and endeavoured to remove the pin; but on feeling for it, could only find the *point* protruding at the side of the frænum linguæ. Her efforts to extract it by the point caused it entirely to disappear; becoming alarmed, she called for assistance. On examination there could not be seen the least trace of any foreign body whatever: she said that "the pin was under her tongue, in the flesh *head foremost*." It gave her no pain, except when disturbed with the fingers; the orifice of the Whartonian duct was patulous, and some saliva was flowing from it. On applying the finger to the floor of the mouth, the pin could easily be felt near to the base of the lower jaw; though from the distanee to which the head had proceeded towards the cæcal extremities of this duct, it was impossible to protrude it by applying pressure from behind; and further, from the handling to which the parts had been subjected, the point had been pushed out of the direction by which it entered, and having pierced the side of the duct, was resting on the alveolar process. It was very moveable, and receded on the slightest pressure.

Failing of its removal by manipulation, the following method was adopted:—Its exact situation being ascertained, the object, together with the parts surrounding it, was seized by the forefinger of the left hand in the mouth, and the thumb in the digastric region, and pressed outward against the inner surface of the lower jaw under the alveolar projection; a tenaculum was then introduced from within outward through the mucous membrane (avoiding the situation of the gustatory nerve, which near this place crosses the duct), so as to inclose the duct and hold the pin fixed; on elevating the tenaculum, the point of the pin became prominent about three lines posterior to the orifice of the duct. The mucous membrane and coats of the duct being cut

through with a scalpel, the pin was removed with the dressing forceps by the *point*, which protruded through the opening of the incision. A copious discharge of saliva followed its removal. The incision healed rapidly, and the patient recovered without any trouble. The pin was $1\frac{1}{4}$ inches in length.

ART. 55.—*The Treatment of Callous Ulcers.* By JAMES SYME, Esq.

(*Contributions to the Pathology and Practice of Surgery.*)

A large blister over the sore and neighbouring swelled parts of the limb has the effect of speedily dispersing the subcutaneous induration and thickening, so as to relax the integuments, and thus remove the obstacle to healing action. In the course of a short time, seldom exceeding a few days after the blister has been applied, the surface of the ulcer, however deep it may have been, is found to be on a level with that of the surrounding skin, not of course through any process of reproduction or filling up, but merely from the removal of interstitial effusion, allowing the integuments to descend from the position to which they had been elevated, as may be readily ascertained by measuring the circumference of the limb before and after it has undergone the effect of blistering. But, along with this change of form, the ulcer in other respects no less speedily acquires the characters of a healing sore, assuming a florid colour, affording a moderate discharge of purulent matter, and presenting a granulating surface, with surrounding margin of cicatrizing pellicle. No subsequent treatment beyond the attention requisite for ensuring quiet and cleanliness is needed, and recovery is completed, not only more quickly, but with much less tendency to relapse than when accomplished by other means.

The facility, rapidity, economy, and lasting effect of this treatment, seem to give it a decided advantage over the other methods in use; and, so far as I am aware, no one who has tried the plan ever afterwards hesitated to employ it in preference to any other. In order to derive the full amount of benefit, the practice must be carried fairly into effect, and the principle upon which it is founded should be distinctly understood. The enlargement of the limb being of secondary formation, and resulting from the continued irritation of a sore allowed to remain unhealed through neglect or improper treatment, when once established, prevents the contraction of granulating action, by which alone solutions of continuity, not within reach of union by simple adhesion, admit of reparation. Pressure, the horizontal posture, and all other means that tend to remove the obstacle thus presented, will promote the patient's recovery. But of all the means that can be employed for this purpose, blisters appear to be the most efficient, and should therefore be employed for the remedy, not only of the purely indolent and callous ulcer, but of other kinds, which, in addition to their own peculiar characters, show evidence of complication with indurated enlargement of the limb. From this condition it is hardly necessary to mention that the œdematous swelling of weakness and impeded circulation must be distinguished.

ART. 56.—*Contraction of the Muscles of the Legs, Feet, and Toes, probably resulting from a Rheumatic Affection — Consecutive Deformity of these parts—Cure by Tenotomy and Orthopedic Apparatus.* By M. ROBERT.

(Condensed from the *Gazette des Hôpitaux*, Nov. 17, 1848.)

A woman, æt. 27, was taken all at once, during her sleep, with a very acute pain in the right leg, which in the morning she could not raise. A few days afterwards similar pains occurred in the lower part of the left leg, whence they radiated throughout the whole limb. Three months afterwards the legs were bent slightly on the thighs, the feet were in state of extension; and in the left foot especially, the four last toes were retracted and bent in the form of a crochet. In July, 1848, three or four months after the contraction, the pain ceased a little, but the parts remained in the deformed position which they had assumed, the inferior limbs became obviously atrophied.

November 20, 1846. To recapitulate the series of symptoms actually present, it appears—

1st. That the leg, the feet, and the toes are in an unnatural and fixed position. 2dly. That the cause of this is not attributable to any disease of the articulations, since motion is possible, and within certain limits without pain; and since articular disease cannot be traced in any part. 3dly. That this state is attributable to the shortening of certain muscles, as demonstrated by the projection and tension of the tendons of these muscles, when by moderate traction we attempt to separate their attachments. The muscles affected are the gastrocnemeii and solaris, the long flexors of the toes, the tibialis posticus, and the flexor of the great toe in a slight degree; in a word, all the muscles of the posterior aspect of the leg. 4thly. The muscles which are thus shortened are at the same time affected with a certain degree of atrophy. This state of muscles has been designated by the term muscular retraction. It is characterised—1st, *physiologically*, by the permanent shortening of the muscle, and the impossibility of stretching it to its original length; 2d, *anatomically*, by the diminution of the volume of the muscle, the atrophy of its fleshy portion, the fibrous portion not being altered, and thus becoming more apparent and proportionally larger; a circumstance which has led some observers to believe that the fibrous portion has really increased at the expense of the muscular portion.

Muscular retraction is not a primary alteration of the muscles. It is most frequently preceded by a state of contraction, which has some analogy with the contraction determined by the will, in this point of view, that the muscle is found in the organic conditions which it presents during voluntary contraction; shortening of the muscle effected at the expense of the fleshy portion, which gains in thickness what it loses in length; but which, in a state of retraction, is involuntary, continuous, and sometimes painful, especially when any endeavour is made to overcome it by traction.

Muscular contraction may cease spontaneously, or by an appropriate treatment; and if it has not continued too long, the muscle recovers

its natural length; but if it is of long standing, and the muscle has become atrophied, the muscular fibre undergoes the change which I have pointed out; the muscle becomes, in reality, shorter, and gradually assumes the characters of muscular retraction.

Thus contraction is a tonic, dynamic, perhaps inflammatory shortening, which may subside, whilst retraction, the effect of contraction, and perhaps also of the absolute immobility in which the muscle has been placed, is an organic permanent shortening.

In this case there is no trace of any nervous affection, whether congestive, convulsive, or spasmodic; the contraction of the muscles of the calf alone can be only a local affection. Sometimes the muscles become the seat both of contraction and retraction, because they are in the neighbourhood of inflamed parts; but in this case nothing of the kind occurred. Rheumatism is unquestionably the cause of contraction. I have seen, M. Robert remarks, many examples, especially in the sterno-mastoid muscle, and the lateral muscles of the neck; it appeared also to be the cause of the contraction in this patient. In fact, this young woman inhabited for three years a very damp lodging. Her health was greatly altered by it, and she was chlorotic; when all at once she was taken with pains, first in one leg and then in the other. The pains were followed by the deformity of the limbs. Here we recognise both the cause and the progress of rheumatism.

There are only two means of restoring the retracted muscles to their usual length.

1st. By a permanent force on the two attachments of the muscle, so as, gradually, slowly, and mildly, to return it by degrees to its natural state. Orthopedy will furnish us with the means to obtain this end; but it will suffice only in cases in which the affection is but slight, and not of long standing. In this patient the long flexors of the toes would be acted upon with difficulty. 2dly. By tenotomy, which has the advantage of obtaining, in a few days, and much more easily, the effects of orthopedy. At all times, since the change from contraction to retraction is slow and insensible, we should first employ, especially in cases which are not of long standing, baths, douches, frictions, &c.

Tenotomy is the method, *par excellence*, in these affections. After the employment of the measures indicated in the case in question, a section was made of the left tendo-Achilles. An apparatus was then applied to adjust the feet; but the adjustment could not be effected, the pain being extremely violent in the trials which were made, and other mechanical obstacles presented themselves. M. Robert then resorted to section of the other tendons of the leg and feet, and especially of the plantar aponeurosis. After these operations the feet could be adjusted; and with the aid of the orthopedic apparatus, successively had recourse to, the result was a complete cure. The patient, it is true, kept in bed about three months, but she quitted the hospital in a most satisfactory state. We saw her several months afterwards, and found her fat, and walking easily without any kind of support. This is one of the splendid results which we have observed of the operation of tenotomy resorted to in these cases of deformity.

ART. 57.—*Mode of Reducing Dislocations of the Humerus at the Bristol Infirmary.*—Without any preliminary treatment, the patient is seated sideways on a firm chair, with his arm hanging over the back, which is well padded, one end of a double or reel-towel is passed through the other end, so as to form a noose, which is applied to the arm just above the elbow. The loose depending part of the towel forms a stirrup, into which the surgeon places his foot, and gradually brings his whole weight to bear on the towel, as an extending power. One or two assistants are useful to press back the acromion, and keep the patient firmly in his seat. The reduction is effected almost immediately, and, if due precaution be observed in properly padding the chair, and the arm where the towel is applied, little or no pain is felt, nor any subsequent inconvenience from the pressure.

Prov. Journal.

ART. 58.—*The Treatment of Aneurism by Compression—Corollaries.* By Dr. BELLINGHAM.

(*Dublin Medical Press*, Jan. 20, 1848.)

1. The arteries to which compression is applicable being far more frequently the subject of aneurism than those to which it is inapplicable, compression is calculated to supersede the ligature in the great majority of cases.

2. The cure of aneurism by compression upon the artery between the aneurismal sac and the heart, according to the rules laid down here, is accomplished by the gradual deposition of the fibrin of the blood in the sac, until both the latter and the artery at the part are completely filled. The process is in fact exactly similar to that by which nature effects a spontaneous cure of aneurism.

3. Such an amount of pressure as would cause inflammation and adhesion between the opposite sides of the artery at the point compressed is never required.

4. The pressure should not be so great as to interrupt the circulation in the artery at the point compressed; an essential agent in the cure being that a current of blood should pass through the sac.

5. Compression by means of two or more instruments, one of which is alternately relaxed, is much more effectual than by any single instrument, and in many instances the pressure can be maintained by the patient himself.

6. The treatment of aneurism by compression does not involve the slightest risk to the patient, and if persevered in cannot fail of effecting a cure.

7. A cure of aneurism effected by compression, according to the rules laid down here, must necessarily be permanent; and in every case in which a cure has been accomplished, the patients have remained well subsequently.

8. The femoral artery remains pervious after the cure at the point at which the pressure had been applied, and no morbid change of any kind is to be detected in either the artery or vein at the side of the compression.

9. When a cure is effected by compression, the vessel is obliterated

only at the seat of the aneurism, and the artery at this part is eventually converted into an impervious ligamentous band.

10. Compression effects the cure of aneurism by more simple and safer means than the ligature, while it is applicable to a number of cases in which the operation is contraindicated or inadmissible.

11. Compression is not necessarily a more tedious or more painful method of treating aneurism than the ligature, while it is much more certain, more likely to be permanent, and is free from all danger.

12. Compression, according to the rules laid down here, has little analogy with the old method which went by this name; and in fact has no greater resemblance to it than the Hunterian operation had to the operation for aneurism which it superseded.

ART. 59.—*Successful Amputation at the Hip-joint—Employment of Ether.* By M. HENOT, of Metz.—In a memoir presented to the Academy of Medicine of Paris, M. Hénot relates the case of an hospital servant (male), 26 years of age, who had a large exostosis of the right femur, involving the bone as high as the trochanters. There was also disease of the medullary cavity with perforating fistulas of the bone, abscesses of the thigh, and hectic fever; under which circumstances amputation at the hip-joint was proposed as the only means of saving life. The operation chosen was that of Béclard, by anterior and posterior flaps, but the posterior flap was prolonged by a third, and the anterior shortened, so as to bring the cicatrix more in front. Ether was inhaled by the patient previous to the operation, which, with the ligature of the arteries, was accomplished in $5\frac{1}{2}$ minutes, and was quite unattended by pain. The wound was brought together by six points of interrupted suture; it was ten inches in length. Four fifths of it healed by the first intention; the remainder was kept open by a moderate suppuration, which continued six weeks, and then declined insensibly, permitting of the complete cicatrization of the wound on the ninetieth day from the operation. The ligatures came away from the eighteenth to the forty-fourth day. The process of cure was entirely satisfactory, and the result was an excellent cushion of flesh for the application of artificial means of support.

Archives Générales de Médecine, Dec. 1847.

ART. 60.—*The Employment of Gutta Percha in Surgery—Its Use in Club-foot, Simple and Compound Fractures, Necrosis, Amputations, Diseased Articulations, &c.* By W. LYON, Esq., sen., Surgeon to the Glasgow Royal Infirmary.

(Condensed from *The Monthly Journal*, August 1848.)

Club-foot. I have now employed this article very successfully in several cases, seen it used in others, and write this to bring it under the notice of the profession, convinced, after numerous trials of all the other methods, that it is by far the most manageable and effectual, and that it will enable every one possessed of even the least dexterity successfully to conduct the treatment of club-foot; thus getting rid of the cumbrous, complicated, troublesome, and expensive apparatus in ordi-

nary use, and enabling us to confer equal advantages on the poor as were mainly confined to the rich, and by which surgeons in situations remote from instrument-makers may, with the utmost facility, treat these species of deformities.

It may be applied in various ways; but the method I have followed is this: they were all cases of *talipes varus* in both feet; and after dividing the tendo Achillis, a procedure probably not required in very slight cases, but if not indispensable, at least greatly abbreviating the treatment in severe ones; a bit of plaster was put on the wound, and a roller from toes to knee for protection of the soft parts.

A bandage of gutta percha, the thickness of a penny-piece, about an inch, more or less, in breadth, proportionate to the size of the limb, softened in nearly boiling water, and dried by gentle pressure between the folds of a towel, was then quickly made to enwrap the limb from the toes to the knee, in the usual manner of the common roller.

The limb is thus encased in gutta percha; and while the material is still soft and adhesive, it is firmly and equally kneaded by the fingers, so as to mould it closely to the parts, and cause the turns of the roller to adhere to each other. The limb is now firmly held below the knee, while the foot is gently twisted outwards, with the toes in the same direction, and upwards. The desired position is maintained until the material becomes cold, which it does in a few minutes, which time may be shortened by immersion in cold water; when the *light*, *hard*, *equal*, *strong* mould thus formed effectually prevents the return of the foot to its abnormal position.

In a few days the gutta percha is removed, a matter easily accomplished by a regular unrolling of the turns of the bandage, reapplication is effected, a little further restoration of deformed parts being obtained; and by thus proceeding at intervals of a few days, the foot and limb are, in the course of two or three weeks, restored to their normal relations.

I suspect it is a considerable recommendation of this method—by the material in form of a roller—that it is with the greatest facility removed, which I do not think would be effected without difficulty if the mould were otherwise formed. It would add greatly to the value of the practice could the material be easily softened, the parts adjusted, and removal avoided. This I have attempted; but the high temperature required to make it soft and adhesive rendered the effect abortive.

I have not experienced any bad effects from the practice; but I can readily conceive, if the mould be dimpled when soft, or otherwise applied unequally, that pain, ulceration, or abscess must follow, although protection by a thick, soft bandage, layers of carded cotton, or a stocking, will go far to prevent or remove them. So likewise, unless in some cases the urine be prevented, by a piece of oiled silk, from constantly soaking the bandage and skin, excoriation will ensue; and it has been said that confinement and accumulation of perspired matters will have a similar tendency. To which I can only reply that it has not happened in my cases, even when the mould has remained on for weeks, which it will very rarely require to do in club-foot.

I have repeatedly, without the least untoward occurrence, operated within a week after birth. The patients treated by the plan recommended were all infants (one excepted, who was three years of age); and it may be questioned whether the method is applicable to more advanced periods of life. From my experience by the analogous method, with Paris plaster, I have not a doubt the gutta percha will answer for more advanced patients in the same degree as the more common modes of treatment; that is, that it will be found as efficacious and manageable, if not more so; but it will be necessary to proportion the strength of the mould to the resistance to be overcome—a matter easy of accomplishment by several coatings of the gutta percha roller.

There is one drawback to the plan; but it is more in appearance than reality. The articulations in the foot and at the ankle are rendered immoveable, and assistance in throwing the foot upwards and outwards, by the weight of the body in standing and walking, is lost. This objection does not apply in the cases of very young infants, who are unable to stand; and the paralysing effect of perfect repose on the overacting muscles, and the gain by the contraction which is permitted to the opposite and debilitated ones, have a rapid effect in restoring the balance of action. At all events it is easy, when the difficulties of removing the deformity have been overcome (by far the most troublesome and painful period of the treatment), to prevent relapse by exchange of the gutta percha for such an apparatus as will allow the muscles to be called into action, the articulations to play, aud the weight of the body, in standing and walking, to aid in the perfect restoration of position and muscular action.

It must not be overlooked that in club-foot (varus, at least) the disease and consequent deformity are not confined to the foot. The whole limb is generally affected, the leg and thigh are rolled inwards; and though the sole may be turned down, if means be not taken to counteract the involution of the other parts, the patient will nevertheless walk with the toes of each foot directed completely inwards, the one requiring to pass over the other at each step, as is often seen; or if existing in a lesser degree, will constitute the ungraceful state called *in toes*. This is obviated in the treatment with the usual steel apparatus, by fixing the leg-straps at a proper point on a metal band which passes round the pelvis. A similar result is obtained by the method I recommend, placing the feet in a pair of boots, with the toes directed outwards, as in the "first position;" the boots being retained in the proper direction by being sewed on a piece of sole leather, and worn constantly or occasionally, as may be thought requisite. In this way one set of muscles is elongated and debilitated, another abbreviated and strengthened, as by the gutta percha on the foot and leg, and balance of power is in a short time obtained.

By perseverance for several months, I have never failed, in young patients, to restore the healthy form and action of the parts.

Fractures. Any plan by which the patient can be invigorated by exercise, while the injury and irksomeness of long and perfect rest in bed are avoided, is surely an important gain. These purposes are most effectually served by the gutta percha.

In several cases of simple fracture of the bones of the leg, the *excitement* and *swelling* having subsided under attention to perfect repose, elevation of the member, and the use of the ordinary roller, lateral cushions, splints, &c., I have most advantageously practised the following method:

The foot being surrounded by a common roller, and the leg with a Scultetus bandage, adjustment of the fracture is maintained by extension, while at the same time (whether beginning above or below is unimportant) the limb is encircled by the turns of a properly-softened gutta percha roller (that is, of a strip of the material two or three inches broad), applied edge to edge, so as to avoid inequality in the mould, which might irritate when it becomes cold and hard. Over this a similarly prepared roller is passed from toe to knee, which, adhering to the one below, and to each of its own turns, forms in a few minutes (a great advantage over the starched bandage and leather splint) an equable, light, strong, hard case for the limb, completely preventing motion at the seat of fracture; and in fact acting, like the shell in some of the lower animals, as an *external* bone, within which are the soft parts, and in this manner, in fracture, the broken bone is protected, and effectually prevented from displacement.

If the patient were to be confined to bed, this method would be applicable to fracture at any part of the leg; but its principal recommendation is, that the patient by it is not necessitated to keep his bed. It will be evident, however, that the plan is not likely to be equally efficacious in all cases; as, for instance, in those near or in the upper third of the femur, where the upper fragment being short, and the lower long, consequently affording by weight a powerful lever, displacement will be hazarded, but may be prevented by extension of the mould to a portion of the thigh.

As to displacement by shortening, this may be prevented by close application of the mould below the broad head of the tibia, which will prevent its slipping upwards; and although it may be supposed that the mould will revolve, and thus alter the proper relation of the fragments, this does not happen, the unequal figure of the limb preventing it.

In a week after the reception of a fracture, the patient may thus be enabled, by his own efforts, to throw his limbs out and sit on the side of the bed; or the limb may be raised and allowed to fall on the bed without injury, and, in fact, without pain. He may be allowed to turn from side to side, to walk with crutches, the limb being slung from the shoulder; the comfort of which, opposed to the ordinary, long, irksome, inconvenient, and debilitating confinement to bed, need not be dwelt upon; and the advantages of which in promoting and perfecting osseous union will be generally conceded, and are peculiarly valuable where the transport of the patient to considerable distances is requisite—a circumstance recommending this method in military practice.

In fractures of the bones of the leg and forearm, and in that of the arm, the eligibility of the gutta percha is very evident; whether applicable to the femur is more questionable; though, if the limb were contained in a tightly-fitting, *light*, *strong*, *hard case*, oblique or trans-

verse displacement would be prevented; and if the case extended to the calf or knee, and to the nates, perineum, ischium, and external aspect of the pelvis, the inequalities of the limb below, within the case, and the resistance to the latter by the pelvis above, would, from the pyramidal form of the contained parts, render displacement by shortening unlikely. Trial, however, must determine the point, and I shall take the first opportunity of testing it.

Since writing the above, I have employed the gutta percha in the case of a boy with fracture at the juncture of the superior and middle thirds of the femur. Extension being made, the material was applied, over a roller, from the toes to the upper part of the thigh, close up to the perineum, round the pelvis, and again upon the thigh and the pelvis, until the nates of the injured side were completely covered. Immediately after, he could, without uneasiness, be turned from side to side, and carried in his mother's arms, and I doubt not could have readily walked with the aid of crutches. Indeed the thigh and the pelvis were immovably connected; they and the leg might be said to have been in a few minutes converted into a hollow bone, in which the nates, perineum, and tapering form of the limb above, with confinement of the foot in the mould below, entirely removed the fear of longitudinal, while the tightness of the case prevented lateral displacement. Farther trial is necessary before inferring a general rule; but certainly the application had a most promising appearance, and enabled the patient to enjoy a degree of ease, and amount of motion quite new to us in fracture of the femur of a few days' duration.

Several theoretical objections may be made to the practice: such as, that the material being applied warm, it will have contracted when cold, so as to cause injurious compression; that its frequent removal and reapplication will be troublesome and prejudicial, and yet without this the state of parts cannot be observed. None of those occurrences, common to this and the treatment by starched bandage, have presented themselves to me; and, if the recommendations are attended to, I do not think they need be feared; while some of them can be prevented, and the others are greatly counterbalanced by many advantages.

Necrosis. I have the method in practice and prospect in several other conditions. Six years ago, a girl was under my care on account of acute necrosis of the tibia. Almost all but the epiphyses became loose, and had been removed by incision; and the limb was then kept straight and steady by splints. At the end of several months osseous matter was deposited throughout all the space from which the necrosed bone had been removed, excepting about an inch in length in the centre; where the small apices of the pyramidally-shaped portions were connected with soft tissue, as in ununited fracture, and, in consequence, the limb has remained useless ever since. Amputation was proposed by one party, removal of the soft tissue and repose, as in ununited fracture, by another. In the meantime, the method of breaking up intervening soft tissue, in non-union of fracture, being proposed by Professor Miller, I determined to give it a trial in the analogous circumstances of this case. The breaking up was very freely executed, and the limb then put up in gutta percha, as described. It has remained free from uneasiness for eight or ten days, and, at least, in such repose as to

afford the most favorable local condition for the practice, while vigour is retained by the free exercise permitted.

Amputation. This girl has had a wooden sole and pin attached to the gutta percha case, the diseased limb being shorter than the sound one, and she now walks freely about the ward with the assistance of a stick. She is enabled to do this by the weight of the body being thrown on the broad part of the tibia within the case, while the hardness of the latter prevents the foot being pushed upwards by pressure from the sole; thus showing another important application of gutta percha, viz. for the formation of a box to receive the stump after amputation in the leg, thigh, forearm, or arm. This can be made in a few minutes, at a trifling expense; will be light, easy—from equality and diffusion of pressure—and sufficiently strong. It can be made of any degree of strength, and can be prolonged to the proper extent, either by a pyramidal coil of the same material, or by attaching a wooden cup and pin.

For long stumps of the thigh or leg, I have a strong conviction of the great efficacy of this method—the case of the girl demonstrates it; and I have a hope that, to the poor and labouring class, who principally require such assistance, it will be found an important acquisition.

Compound fracture. A few days ago I dissected off a flap, and removed a detached fragment three or four inches long, which lay in the cancellous structure at the point of contact of the two fragments, in a case of compound fracture of the tibia, which has been under treatment for six months, and is still ununited. I likewise pared the smooth rounded extremities of the fragments; and when the excitement has passed off, intend to put up the limb in gutta percha. By perfect repose, the improvement of the debilitated frame by exchange for exercise after the long confinement to bed, and the removal of the dead fragment which acted like a foreign body, I hope yet to avoid recourse to amputation.

Diseased articulation. I have likewise the material under trial for preventing motion in diseased articulations, a mode of treatment now universally commending itself in theory as in practice; and here, too, the article bids fair for supplanting the methods of accomplishing the purpose hitherto in use. When employed with this view, its application in the form of a roller is much superior to that of a splint, the latter permitting some degree of motion. Many other applications of this pliable material suggest themselves; but these trials and propositions will suffice at present for attracting the attention of practitioners to its various and important uses in surgery.

Art. 61.—*On the Treatment of the Irritable Stricture of the Urethra.* By J. P. Vincent, Esq.

(*Observations on some of the Parts of Surgical Practice*, 1847; p. 178.)

I am aware that strictures will form quite independent of violence done to the urethra. There are old and very indurated ones of long standing, and occurring in various and uncertain parts of the urethra, which are benefited by the use of metallic bougies, and by the pressure they make upon the parts; but in the *irritable stricture* I am confident

that it is not cured in the best way by distension and pressure. I find, if I can once get into the bladder the finest instrument of the catgut kind, I have never been baffled in setting the tube to rights; but this confidence rests upon the fact that the bougie should pass absolutely through the whole urethra, and clearly into the bladder. This accomplished, the patient passes a slender stream with less straining and more comfort than he did before. On the contrary, I have generally found that when I have passed an instrument only just into the stricture, and even forced it through as far as possible without injuring the membrane, but not into the bladder, that, so far from the patient passing his urine better after the operation, he has had much more difficulty, and sometimes altogether a stoppage. These facts prove that the effects that bougies have on the parts is not that strictures of the ordinary kind are cured by pressure, although pressure may for a time dilate the mere contraction, but that there is an influence arising out of the sympathies of the tube which presents itself as a cause, by which a striking and permanent relief is produced in the stricture by a small bougie gently gliding through the prostatic portion of the urethra and fairly entering the bladder, whilst, on the other hand, the mere act of distending a stricture really excites an irritation in the part that adds to the mischief. Even if no other than a fine bougie be daily passed, the patient will continue to improve, although the size be not increased. It is, indeed, upon the principle of the associations of actions in certain parts of the urethra that these sorts of strictures are cured. Moreover, I have observed that when it has seemed proper to increase the size of the bougie, that on the first use of this larger one the patient has not felt so well as before, but again feels the improvement go on as long as the same size is continued. By these gentle means I have no doubt, from what I have seen, that this class of strictures is best, most safely, and most permanently cured; that irritation, which has called into action associated derangements, being thus removed.

But the influence goes beyond the first stricture I have now spoken of; for if this has existed some time, and advanced so far as to have formed a perfect contraction, there is then another formed in a part anterior to the other, as is well known to surgeons; and if a bougie larger than that which would be used for the posterior stricture be taken, the tube is found obstructed at about four inches down. Now as this is the sequence of the other stricture, and as both are formed in unvarying places in the urethra, and both relieved by passing the bougie to the utmost extremity of the tube, they both must arise from some peculiar state arising out of the endowment implanted in the part near the bladder, independent of contingent circumstances, and acting under settled associations; and therefore, I conceive, it is not correct pathology to say that strictures are the result of casual inflammation indifferently attacking some part of the urethra. This view is strengthened by the fact that the beneficial influence of the bougie is produced on the first stricture, whilst it, by the size, might be regarded as only acting on the posterior, being too small to be calculated in any way to distend the first stricture, while the posterior, on the other hand, will sometimes be benefited by only acting on the anterior one.

In proof of the advantages of mild treatment in strictures, I shall

produce this one case: A military gentleman, who had been stationed some years in the Mediterranean, got leave to come to England for relief, as he could get none abroad. He suffered all the misery attending bad strictures, squeezing out a small quantity of urine with torment, &c. He sought the aid of a surgeon, who adopted the practice of forcing a metallic instrument through the stricture, by which he lost deluges of blood, and found, besides, the treatment made no advance in relieving him. He then placed himself under my management. I employed a very fine catgut, but had to make several attempts before I could pass it into the bladder. After I had once accomplished this, he felt considerable relief; and afterwards his improvement was rapid. He was quite restored in all the powers and functions of the tube in a comparatively short time. I am ready to believe that there are no strictures of that kind, which have their origin in mere irritation, that are not perfectly curable by this line of conduct.

Art. 62.—*Excision of the Head of the Femur in Caries of the Hip-Joint.* By Henry Smith, Esq., m.r.c.s.e.

(*The Lancet*, April 1st and 15th, 1848; condensed.)

Amputation at the shoulder-joint has been performed many times for caries of the head of the bone, and for compound fractures in that locality, but there are few well-educated surgeons who would think of resorting to this proceeding now, when the operation of removing the head of the bone is so well understood, and its benefits are so universally acknowledged. Resection of the ends of bones entering into the formation of joints has almost entirely been confined to the elbow and shoulder; and it is rather a curious and an inexplicable fact that, knowing the benefits of these operations, especially that of removing the head of the humerus, British surgeons have not thought of putting in force an operation of a similar kind in another locality—namely, the hip.

The subject has never had paid to it, by most British surgeons, that due consideration to which it is entitled, and it is only very lately that the attention of the profession has been particularly drawn to it.

About thirty years ago, Mr. Anthony White, of the Westminster Hospital, met with a case of disease of the hip-joint, in which all the ordinary measures of cure were found to be unavailable; and in order to give his patient a chance of life, he deemed it fit to resort to a proceeding of a novel character—namely, resection of the head of the thigh-bone. He put this in force, and with the most entire success, as will be seen by the following extract, which I take from Mr. Cooper's 'Surgical Dictionary:'—"The patient was a boy whose femur had been dislocated from disease of the hip, the head of the bone lying on the dorsum of the ilium. There were several fistulous openings in the hip, through which the bone could be detected in a state of caries. He had suffered from the disease for three years, and was in an exhausted condition. Mr. White, reflecting that the original structure of the joint had been annihilated, that the boy would die if no attempt was made to get rid of the diseased head of the femur, and,

even if he lived, the limb fixed in this manner across the other would be an encumbrance only, determined to operate. Being assisted by Mr. Travers, he cut down upon, and exposed the head and neck of the femur, and having sawn through the bone just below the trochanter minor, he raised the detached fragment with an elevator, and extracted it. At the end of a year he recovered, and so useful a new joint had formed, that, with the assistance of a high-heeled shoe, he could walk well, and execute the common movements of the limb. He lived five years afterwards, and died of phthisis."

The parts taken away after death were preserved, and are now in the Museum of the College of Surgeons, No. 391 in the Pathological department. The preparation affords a complete and an interesting proof of the benefit derivable from this operation. A false joint had formed, the end of the femur being securely though movably attached to the ilium by a strong capsule of ligamentous tissue.

Since the period of Mr White's operation, with one exception, resection of the head of the thigh-bone appears to have fallen totally into oblivion amongst British surgeons. About three years ago, however, a case of disease of the hip was admitted into King's College Hospital under Mr. Fergusson; it was impossible that any ordinary measures could be of avail, and the patient was gradually sinking. To give him a chance of life, Mr. Fergusson put in practice the operation of White with entire success. This case has already been brought prominently before the profession;* but I shall here mention its particulars.

A boy, æt. 14, had been suffering for several months from disease of the hip, and had been discharged as incurable from one of the largest hospitals in London. The malady had made such rapid inroads upon his constitution, that it was evident he would sink, unless some operative proceeding were resorted to. In addition, the local symptoms were such as indicated that an operation might be successfully undertaken. The head of the thigh-bone was dislocated on to the dorsum of the ilium, and could be felt through the soft parts lying in that situation. A large sinus was situated over the great trochanter, through which the finger could be passed, and carried around the articular extremity of the femur. Several sinuses existed contiguous to the larger one; but it could not be ascertained that any led to diseased bone, or communicated in any way with the pelvis. The head of the bone appeared to Mr. Fergusson to be acting as a foreign substance amongst the soft tissues of the hip, and thus causing great irritation. The operation was determined upon. The head, neck, and trochanters of the femur, measuring four inches and a quarter in length, were removed. Not a bad symptom ensued, and the result was most satisfactory. The boy was brought from the very gates of death; he regained robust health and strength, had a useful limb restored to him, and now remains a wonderful instance of the benefit which the art and skill of the surgeon, when rightly applied, can confer.

The common malady known amongst surgeons as hip-disease consists in an ulceration of the cartilages, and a carious condition of the

* See Medico-Chirurgical Transactions for 1845.

bones entering into the formation of the joint. The majority of cases are found to exist in children and young persons of a naturally unhealthy and scrofulous habit; and in these its chief influence appears to be excited upon the bone. It is particularly the head of the thigh-bone which, from its spongy structure, is more prone than a more compact tissue to put on a low, scrofulous inflammation, and suffer consequent disorganization. If the disease goes on increasing in severity, the powerful and resisting ligaments of the joint become involved, and give way, and thus a dislocation of the thigh-bone takes place. Profuse suppuration ensues, and matter escapes in large quantities into the surrounding tissues; communications are formed between the diseased parts and the integument; and thus the local malady is of a most formidable nature.

But the mischief unfortunately does not terminate here; the constitution sympathises most acutely with the local affection. The continual drain of matter, and the severe pain which is an accompaniment of this disease, necessarily produce, as their results, great emaciation and diminution of strength, want of sleep, sweating, and cough, and the patient is gradually brought into a most desperate condition. In many instances he is, after a comparatively short period of suffering, carried to the grave; or should this not be the case, he lies, perhaps for years, a helpless and pitiable object, harassed by pain, and worn down by slow and wasting hectic. It is fortunate that the foregoing is not always the true picture of a case of hip-disease; in many instances Nature, aided by the efforts of a judicious surgeon, will do much. The malady may not be of so serious a character as will resist the application of suitable remedies, and the constitution may be powerful enough, under certain favorable circumstances, to bear up against its attacks, and thus allow time and opportunity for those remedies to be successfully applied. But this favorable result cannot be expected to take place in the more severe cases, especially when unfavorable circumstances have existed, and when there has been neglect. The subjects of the disease will either die, or they will remain in a crippled and pitiable condition for the remainder of their lives.

Such being the condition of things, then, is it not reasonable to suppose, that by taking away the cause of these sufferings, even by a severe operation, the patient will be placed in a much more favorable state than he was before? No hope remains for him if the disease is allowed to go on unchecked; but some considerable hope can be held out by the surgeon, who will be bold enough to resort to a proceeding which is allowed to be justifiable in similar diseases in other parts of the body. But apart from this assertion, the operation *has* been performed, life *has* been saved, and the patients *have* been restored to comfort and health.

One of the chief rules in surgery is this: that whenever any foreign substance is lodged or produced in any part of the body, causing irritation and disease, the same should be removed by the art of the surgeon, if it can be got at. And how constantly does the surgeon act on this principle? He hesitates not, when other measures have failed, to remove, by a formidable and frequently fatal operation, a calculus from the bladder, which is destroying his patient's health and comfort.

If the shoulder-joint be diseased, he deems it his duty to remove the head of the humerus, and even portions of the scapula; and some are bold enough even to open the abdomen for the purpose of taking away ovarian tumours—an operation considered by many to be even perfectly in accordance with the rules of art! The diseased bone must be looked upon as a foreign body, producing all the mischief; the indication is to remove it, and if this can be done successfully, it is evident that the proceeding must be regarded as one entirely warrantable by science and the principles of surgery.

But it requires the exercise of a sound judgment to determine upon the proper cases in which this severe operation should be attempted. It must be remembered, that it is not every incurable disease of the hip-joint for which this remedy will be suitable. I shall speak correctly, perhaps, if I say that it is not applicable to the majority of these cases; for it is only under particular circumstances that resection of the head of the femur should be attempted. The disease in the hip must be in its last stage; it is necessary that dislocation of the thigh-bone from its socket should have taken place, and there must be evidence of the disease being confined chiefly to the upper part of this bone, and of a non-implication to any great extent of the pelvic bones.

The symptoms of the last stage of hip-disease and of dislocation are sufficiently well known. At the same time I would have the surgeon not to be too hasty in making up his mind as to the existence of dislocation, for there are cases to be met with in which the signs are deceptive. The distorted aspect of the hip, and the shortening, may lead him to suppose that dislocation exists, especially if the disease has been of long standing. Notwithstanding these symptoms, however, the head of the bone may yet be in its socket, either unaffected by the disease confined to the neck and trochanter, or in a state of partial anchylosis. This occasional difficulty of diagnosis will not stand in the way, however, as few surgeons would think of performing this operation, except in those cases in which it is evident to the eye and the finger that the head of the bone has slipped from its natural situation, and is in a carious condition. If, in such a case, the disease has existed for a considerable time, abscess and sinuses will have formed, and through the latter, by means of the finger or the probe, the head of the bone may be felt and the amount of disease detected. An abscess may exist in this region, and by evacuating it the same object may be gained; the head of the bone will, in some instances, be found lying in the midst of this abscess, on the ilium, and the finger may readily be carried over its surface. To what extent the pelvic side of the joint may be diseased will be a more difficult thing to ascertain, and there are, perhaps, no signs by which we can to a certainty learn this. If, however, much disease exist there, sinuses will be formed over the parts, and by means of them some correct information may be gained. Sometimes the acetabulum in these bad cases is completely perforated, and matter gets into the pelvic cavity; in this case a considerable impulse will be given to any collection of matter which may exist superficially on the patient's coughing, and the local and general symptoms will be much more severe. By looking at the anus and rectum, the surgeon may sometimes be assisted in his diagnosis; for it occasionally

happens that when the ulceration extends through the acetabulum, and matter passes into the pelvis, it descends by fistulous openings to the sides of the anus, or more readily into the rectum. This objection to the operation—namely, the existence of disease in the pelvic side of the joint, cannot certainly be entirely overcome; but I believe that great misapprehensions exist with regard to this point. Some surgeons suppose that in every case of hip-disease there must of necessity be an implication of the pelvic bones; even the celebrated Pott laboured under the mistake, for he says,—"In the case of a carious hip-joint the pelvis is never unaffected; the acetabulum, ischii, and parts about, are always more or less in the same state, or at least in a distempered one, and so, indeed, most frequently, are the parts within the pelvis." *

If psoas or iliac abscess exist, (and iliac abscess does sometimes result from disease of the hip,) an impulse will be given on coughing or crying, and there will be other symptoms which more particularly belong to this affection which the surgeon must well look into when he is thinking about the performance of the operation; for should any of these be met with, it will be out of the question.

If, then, there be dislocation of the thigh-bone, and the head of that bone be found to be extensively diseased, and there is no disease of importance in the pelvic bones, and no communication between the abscesses about the hip, nor any with the pelvis or abdomen; if, also, with these conditions, it be evident that the patient is slowly and gradually sinking under his malady, and the surgeon is convinced that there is no hope for him from natural and remedial means, but that he can hold out considerable hope by the adoption of a proceeding, severe indeed, but not so formidable as is imagined,—then will it be both justifiable and proper to have recourse to this operation; and I think it is the duty of the surgeon, in such a state of things, to give his patient a chance of life, and not to suffer him to die unaided by those resources which are expected to be in his possession.

Various methods have been proposed for performing this operation on the living body. Of all these methods, that which is put in practice by Mr. Fergusson appears to me to be the most applicable. He states,—"An incision through the skin and other tissues (six inches in length, carried over the trochanter) enabled me to expose the portion of the femur which I had resolved to remove; the head, neck, and trochanter major, were isolated and thoroughly turned out of the wound by twisting the limb over the opposite thigh, and a common saw enabled me to effect the separation of four inches and a quarter of the bone." †

In this case it will be seen that not only the head of the bone, but the great trochanter also, was removed, in consequence of a supposition that the disease extended so far: thus the reason for so long an incision.

If the head of the bone alone is to be removed, a shorter incision, of from three to four inches, will suffice. If the surgeon requires more room to work in, as, for instance, in the application of his saw, a

* Pott's Surgery, vol. iii, p. 412. † Fergusson's Surgery; second edition, p. 382.

second incision may be made to cross the first—a proceeding I have lately seen Mr. Fergusson put into practice. Care must be taken not to injure the great sciatic nerve, which will be found somewhat in the way. The bleeding will probably require little attention ; no ligatures were required in those cases which have fallen under my own observation.

It is highly necessary that the surgeon should look to the condition of the cotyloid cavity; and, as far as I can ascertain, this important point has not been insisted upon except by Mr. Fergusson. If it be found not involved in the disease, the operation is finished; but if the edges of this cavity be carious the cutting pliers should be used, and the unhealthy portions taken away ; and should any part of the socket itself be in the same condition it should be taken away by means of the gouge. No surgeon should attempt to perform this operation unless he has in readiness these two most useful instruments.

The after treatment is to be conducted on the ordinary principles of surgery, but particular attention should be paid to the position of the limb; it should be kept straight, and extended as much as possible. If the case does well, the patient gradually loses his night sweats and restlessness; the discharge of matter diminishes, and sinuses which may have existed slowly close up. Under these circumstances it may be fairly presumed that every source of irritation has been taken away.

I have collected together as many as sixteen cases of resection of the head of the femur, and of these one half proved successful. I find that the operation was not performed in every case for caries of the joint; but it has been undertaken under other circumstances. Thus, in twelve cases mentioned by Roux, it was performed twice for a comminuted fracture of the joint by a ball; once in a case where, after an old fracture into the joint, necrosis supervened ; eight times for disease of the hip-joint ; and once for caries of the great trochanter and neck of the femur.

Independent of these twelve cases, this operation has been performed four times : once by Textor, on the 15th of January, 1845 ; all above the lesser trochanter was removed; a complete recovery took place. The three remaining operations have been performed by British surgeons : twice by the gentleman who revived it in this country—namely, Mr. Fergusson, and once by Mr. Simon, of St. Thomas's Hospital. Of the first case of Mr. Fergusson I have already mentioned the particulars; and I have only to add that, within a very few weeks, I have had an opportunity of seeing the patient upon whom the operation was performed three years since. He is a fat, hearty youth, and able, by means of a high-heeled boot and one crutch, to walk long distances. The motions of the false joint which has formed are free in almost every respect ; the limb is strong and well developed, and there is a firm and healthy cicatrix in the position of the wound made in the operation.

The second operation was performed about the middle of November last, on a lad eight years of age. Disease of the hip had existed for some time, and had resisted ordinary measures of cure. Dislocation had taken place, sinuses existed, and a large abscess had formed over

the ilium, through which, when evacuated of its contents, the diseased head of the bone was easily felt and its condition ascertained. There was great emaciation, hectic fever, cough, and sweating at night, and it was imminent that the child would fall a victim to his malady. After due deliberation and careful examination, Mr. Fergusson determined upon putting his plan into execution. He performed the operation by making a straight incision over the neck and head of the femur, and another crossing it; by this means the diseased portion of bone was got at and removed by the saw. The cotyloid cavity was then examined with great care, and the edges of it, being found carious, were removed by the cutting pliers.

At present it is impossible to give a correct opinion as to what will be the result of this case. As far as it has gone the patient has been much relieved; he has improved in health; has lost his cough and night sweats; has been enabled to sit up in the ward; and complains of no pain in his hip. The wound has nearly healed, but an abscess has formed in its neighbourhood, and thus one is not able to tell whether all disease has been removed. It is the opinion, however, of Mr. Fergusson, that it will ultimately do well.

Mr. Simon, at St. Thomas's Hospital, performed the operation a few weeks ago. Here the disease was of two years' standing; dislocation of the thigh on to the upper margin of the acetabulum had taken place; sinuses and abscess existed, and there was every probability that the child would die. Mr. Simon, after much care, determined to remove the head of the bone; this he did, as well as some portion of the acetabulum which was involved; unfortunately the patient died four days after the operation. Thus, then, out of sixteen cases in which this operation has been performed, one half have been successful; and this, in such an operation, and under such forlorn circumstances, must be considered as decidedly very satisfactory. The success in our own country has been very great, for out of the five cases which happened three of them proved successful.

Postscript.—Within the last few days this operation has again been twice performed: each of these cases have been under my close observation, and in both the operation was undertaken partly at my own suggestion. In the first, it was performed by Mr. French, of the St. James's Infirmary. The case was admirably adapted for it, and I can speak with more confidence on that point, as I had repeated opportunities of observing it,—the patient having been an inmate of King's College Hospital eighteen months ago, under Mr. Partridge, whilst I was in office there, and subsequently having been transferred into the St. James's Infirmary, where, through the kindness of Mr. French, I had the opportunity of seeing it. The patient was a girl of ten years; the disease had been standing some time; dislocation had taken place; the head of the bone could be felt on the dorsum of the ilium in a carious condition, through a large sinus; there were no evidences of disease in the pelvis, and the child was a complete cripple and in a delicate condition. The head and trochanter were taken away, and no disease was found to exist in the acetabulum.

In the second case the operation was performed on the 24th of March by Mr. Haynes Walton. The patient was a lad of sixteen,

who had suffered for two years from disease of the hip; he had been under various treatment; was several months under the care of the late Mr. Liston. The symptoms were very severe; the appearances those of the last stage of the disease; the hip much distorted; the limb shortened. He suffered excruciating agony when any pressure was made over the upper end of the femur, and an opening existed below the trochanter through which a bloody purulent discharge flowed, and on passing a probe through this sinus bare bone was discovered. There were no indications of severe disease in the bones of the pelvis, and no signs of mischief in the iliac region; the boy's health was much pulled down, and he was a complete cripple, and likely to remain so all his life, as it was evident that disease existed in the upper part of the femur. An operation of an exploratory character being determined upon, Mr. Walton commenced by making a long incision over the upper part of the femur. By this means he discovered that the head of the bone was lying out of its proper site, in a carious condition, and that the trochanter was also much diseased. The tissues being well cleared away, the saw was applied below the trochanter and all above taken away; the cotyloid cavity was then looked to, and, as was anticipated, not much disease was found; the cartilage even was still found covering nearly all its extent, with the exception of a small portion at the bottom, which was gone, and the subjacent bone carious. This was removed by the gouge; a small part of the rim of the acetabulum was also bare, and was also removed; about four inches of the femur were taken away.

I have continually watched this patient since the operation, and am happy to bear witness to the beneficial effects which have already accrued. He has not suffered in any way from the proceeding; but a marked improvement has already taken place in his condition. The excruciating pain which had tormented him has ceased, he is regaining strength and spirits, and there is only a very moderate discharge from the wound, which has, to a great extent, closed up. The last report I heard of Mr. French's case was that it was doing well. (Vide *Report on Surgery* in the present Volume.)

SECT. IV.—RARE SURGICAL CASES.

Art. 63.—*Remarkable Case of general Anchylosis cured by the Application of Cold Water.* By Dr. L. Fleury.

(Condensed from the *Archives Générales*, July 1848; p. 335.)

Madame André, æt. 36 years, of a highly nervous temperament, subject to leucorrhœa and occasional erratic rheumatic pains, consulted a physician for the leucorrhœa in 1842, and during five months subsequently employed astringent injections several times daily. In April, 1843, immediately after the use of an injection, she was attacked with a sense of heat and pressure in the head, with nervous symptoms,

which returned daily, unless the attention was forcibly diverted. In the beginning of May her gait became unsteady, and she was always in dread of falling forwards, which became so exaggerated, that she could not walk across her room without assistance, and this dread was remarkably increased by the slightest moral emotion. At the end of the month, violent pains occurred in the eyes: opening the eyelids gave great pain; and there was a glutinous secretion from the conjunctiva, the sight being somewhat weakened. In July the eyes got well, with the exception of a slight dimness of sight, but this affection was replaced by violent pains in the tempero-maxillary articulation, which almost prevented mastication. The pain subsided in a few days, but the loss of motion of the jaw remained. In August, very intense, sudden pains, of short duration, were felt in different parts of the body, sometimes in the muscles, sometimes in the articulations, but they were unaccompanied with either redness or swelling. One morning in December, on awaking, violent pain was felt in the heels: in putting the feet to the ground, the sensation of a million pins penetrating the tissues was experienced; and three or four days after this the tibio-tarsal articulations became very painful. In January, 1844, Madame André, who had hitherto taken no medical advice, applied to an empiric, but after five months' treatment, had experienced no relief. By the month of October she was much worse, the tibio-tarsal articulations were swollen and painful; the knees were affected; they were painful, swelled, and irregularly deformed; walking was quite impracticable. Homœopathy was now resorted to, and proved totally useless. In January, 1845, violent pains occurred in the shoulders, elbows, and wrists; their movements were extremely painful, and they became gradually worse, and more limited. Towards the month of August the knees were almost completely deprived of motion, the legs being slightly flexed. In October the vertebral column was attacked, and the patient was obliged to remain constantly in bed. From January to March, 1846, the motions of the vertebral column and the coxo-femoral articulations became more and more painful and limited. In October of this year, Dr. Fleury was consulted.

Present condition.—The patient has not quitted her bed for a year, being incapable of any kind of motion; almost constant dorsal decubitus, and there is consequently a deep eschar over the sacrum; the attendance of two persons is constantly required, and she makes the most piercing cries every time she is moved. The emaciation is extreme, which the patient attributes to the contraction of the jaws, which have prevented her swallowing anything but liquids. But little appetite; habitual and obstinate constipation; skin dry and rough, always arid, and of a dirty grayish colour; face altered; the general habit analogous to that of individuals affected with saturnine cachexia; jaws contracted, so that the lower projects beyond the upper teeth; she can effect only the slighest motion of the inferior maxilla with great pain; the power of raising the shoulders completely abolished; the forearm can be slightly flexed, but extension is incomplete, and pronation and supination entirely null; motions of the wrists abolished; the fingers, in a state of the strongest possible flexion, are fifteen centimetres distant from the palm of the hand; the thighs

slightly flexed on the pelvis; the psoas muscles can be felt through the abdominal walls contracted and rigid: motion in the coxo-femoral articulation abolished; the legs strongly flexed, without any power of moving them; the knees so powerfully contracted against each other, that their internal surface is denuded of skin; all motion in the feet lost; the trunk curved, the vertebral column forming an arc of a circle, with a posterior convexity; and the patient can neither straighten nor bend it. In consequence of the emaciation, the articulations appear very large, but no alteration of size can be made out.

In this deplorable and singular case, my first inquiry was—what could be the cause of the general anchylosis, of which condition there are only two or three cases recorded by Mr. S. Cooper and M. Velpeau; and I then asked what are our therapeutical resources in an affection of so long standing, and so obscure a nature. On the 20th of October Dr. Ricord was called in consultation.

M. Ricord considered that motion was almost entirely abolished in all the articulations, and that it was to be attributed principally, if not exclusively, to muscular contraction of a rheumatic and neuralgic character; advising baths, cataplasms, emollient frictions, and narcotics. The patient rejected these measures, having been so frequently disappointed by them, and expressed a desire that the cold-water cure should be tried, which I consented to.

The treatment was commenced on the 15th of November, and continued for eleven months. I placed an oil-cloth under her, and employed lotions of cold water, applying them rapidly with a large sponge; this was repeated three times a day, five or six minutes each time. The reaction was promoted by two or three woollen coverlets, in which she was wrapped for an hour or two. The first applications were very painful, the cold producing a disagreeable, painful sensation; and reaction was with difficulty established. On the 15th of December, the lotions were borne well, reaction was quick, the skin less dry and rugose, the appetite better, the patient felt stronger. January 15, 1847. General condition much ameliorated; a better tint; very rarely any spontaneous pains in the joints; no longer the acute suffering on motion. I substituted wrapping in a cloth, wetted and wrung out, covered with two woollen coverlets, the patient remaining enveloped for two or three hours, and when the sweat became established, the free use of the cold-water lotion. February 15. The teeth were no longer closed and projecting; slight motion in the jaw; fingers less rigid; knees may be separated a little; she does not slide down in her bed so much, and sometimes lies on her side: with the assistance of two people she can get out of bed and support herself on two chairs, remaining upright two or three minutes; the trunk is strongly flexed on the pelvis, the thighs on the pelvis, and the legs on the thighs. Wet cloths and lotion were applied in the morning; she was placed upright in a large tub to receive a shower-bath in the day; lotions in the evening. March 1. The patient began to eat solid aliment; the fingers were moved more easily; the knees could be separated further; being placed in an arm-chair, she could remain three or four hours without great pain or fatigue. On the 15th, she got out of bed without assistance; she could soon move about the room, sup-

porting herself on the furniture, always dragging her feet on the floor, in consequence of the immobility of the coxo-femoral articulation; wet cloths in the morning, followed by the shower douche; in the course of the day, and at night, the shower douche; exercise and spontaneous motion as much as possible. On the 25th she could move round the room, supported by two persons; during two or three minutes she remained standing without assistance under the shower douche. In the morning a hot-air bath, followed by a shower douche; in the daytime and evening the shower douche. March 31st. She could walk some steps with the assistance of a stick; the trunk a little straighter; some motion of flexion in the elbows, wrists, and knees. The same treatment.

April 15. The improvement has not progressed so rapidly. I advised her to go to Bellevue.* The treatment was recommenced on the 20th. In the morning the dry-air bath, followed by the shower douche, in her own chamber; at four in the afternoon, she was placed in a chair, and carried to the establishment; she received a general shower douche for five minutes, and a mild douche (mobile) upon the different articulations. May 20th, the patient walked easily, supported on the arms of a domestic, a third of the distance between her residence and the establishment, about 500 steps; the separation of the knees was almost normal; the trunk was manifestly straightened; the bad colour of the skin had entirely disappeared, the tint being clear and animated; appetite good; the body obviously fatter; constipation had ceased. June 20th. The morning, as well as the evening douche, was taken at the establishment. The douches were preceded by forced motion, to which I submitted the scapulo-humoral, humero-cubital, radio-carpal, coxo-femoral, femoro-tibial, and tibio-tarsal articulations. July 20th. The patient had little energy and courage to bear the forced motion, which occasioned acute pain, but was soon relieved by the application of sedative compresses. The sweating process in the morning was suppressed; three douches daily. August 20th. The motions of the limbs are now sufficiently restored for the habitual occupations of life, although the fingers are still bent upon the palm, and the motions of pronation and supination are still constrained; and the feet cannot be sufficiently raised above the ground. On the 20th of September she walked without any assistance whatever. By the 20th of October, motion was not perfectly re-established. But Madame André, who has very little energy, and who dreaded excessively the pain produced by forced movements of the limbs, would not submit to further trials. She remarked—"I am perfectly satisfied with my condition; the motions which I can perform satisfy all the exigencies of my life, and I do not require to purchase greater extent of motion at the price of new sufferings." The treatment was accordingly suspended. On the 1st of June, 1848, Madame André's condition was unchanged.

[The pathologist will doubtless question the propriety of designating this disease "Anchylosis." On the cold-water treatment, vide *Report of Surgery* in the present volume.]

* The site of an hydropathic establishment.

ART. 64.—*Remarkable Case of Fracture of Three Vertebræ, of the Sternum, and of Three Ribs.* By M. BRABANT.

(Condensed from *The Annales et Bulletin de la Société de Médecine de Gand*, and *Gazette Médicale*, April 1848, p. 276.)

A mason, æt. 45, fell from the height of a first floor, upon stones. No one saw him fall, but he was found lying on his face a few minutes afterwards. He complained only of violent pains in the back. The following day M. Verbuck found a deep ecchymosis between the shoulders, with pain, augmented by the slightest motion or pressure; complete paralysis of the inferior extremities, bladder, and rectum, and total loss of sensibility from the middle of the thorax; respiration slow, anxious, difficult, and entirely diaphragmatic; the thoracic parietes immobile, apparently paralysed. It was concluded that he had pressure or dilaceration of the spinal cord from a blow on the dorsal vertebræ, and probably fracture. A fracture was also detected of the superior third of the sternum, the inferior fragment riding on the superior. There was no sign of contusion on any part of the chest. It must accordingly be inferred that the sternum violently bent at the moment of the shock, was broken like a tense cord by the two ends.

Death occurred on the fifth day. The autopsy developed the sternum broken at the articulation of the square portion with the second portion. This solution of continuity may therefore be regarded rather as a separation than as a fracture, since the articular surfaces were not even yet ossified.

There was fracture of the bodies of the second, third, and fourth dorsal vertebræ, the fractures proceeding in different directions, but no fragment being displaced. On compressing the fractured portions, a putrid sanies escaped from between the fragments, which were enveloped in a thick detritus of the surrounding soft parts. The three right ribs corresponding to the three broken vertebræ were fractured up their posterior angles, evidently produced by the direct blow upon the vertebral column.

ART. 65.—*Case of undescribed Congenital Malformation of the Shoulder-joint, simulating Congenital Dislocation.* Communicated by Dr. O. B. BELLINGHAM.

(*Dublin Medical Press*, July 5, 1848.)

[The patient was a labouring man, 58 years of age, admitted into the hospital when suffering from bronchitis.]

In examining his chest, I noticed that his right shoulder and arm presented a very different appearance from the left; the muscles, particularly the deltoid, being atrophied, and the bulk of the arm being one-half that of the opposite limb, in which the muscles were largely developed. The patient could not raise the arm to a right angle with the body, but all the underhand motions were well performed; and he says he could carry heavy bodies in the hand. On being questioned, he said this had been the condition of the arm as long as he could re-

member; he had never received an injury in the part until two or three years since, when the clavicle on that side was fractured.

On examination, the shoulder-joint presented somewhat the appearance of a congenital dislocation; the acromion process was very prominent, the deltoid muscle scarcely developed, and the arm about half the size of the opposite limb; in every motion of the joint the scapula moved with the humerus, as if anchylosis had taken place; the arm cannot be brought to a right angle with the body; when raised nearly to this point, there is a sudden check to its further elevation. The head of the humerus does not form any prominence in the axilla, nor is there a vacant space between the acromion process and the head of the humerus; and the elbow does not project from the side.

On a post-mortem examination, the supra-spinatus, the infra-spinatus, and the subscapularis muscles were found to be atrophied and converted into fatty matter, similar to what is seen in cases of very old unreduced dislocation, where the muscles had not for many years been called into action. Scarcely any traces of the deltoid muscle existed; the biceps was wasted, as were likewise the other muscles of the arm, but they were not altered in texture. The capsular ligament of the shoulder-joint was very thick, consisting of several layers, which were separated from one another by cellular tissue. At the under surface of this ligament, and apparently forming a part of it, a round, very strong ligament passed from the scapula to the humerus, which became extremely tense when the arm was raised from the side, and rendered it impracticable to bring the arm above a right angle with the body, even when the muscles connected with the joint were removed. The head of the humerus was in contact with the glenoid cavity, and remained in contact with it after the muscles were cut away, and after the capsular ligament had been opened above. The scapula, clavicle, and humerus were small, resembling those of a delicate female rather than of a labouring man. There was no appearance of the clavicle upon that side having ever been fractured.

The condition of the shoulder-joint now described, which there is every reason to believe was congenital, must constitute a very rare form of malformation, as the most recent work upon injuries and diseases in the vicinity of joints, by Mr. Smith, contains no case resembling it.

The original malformation here was undoubtedly in the capsular ligament of the shoulder-joint, the inferior portion of which was condensed, shortened, and converted into a kind of round ligament, which so limited the motions of the arm, that it could not be raised above a right angle with the body;—the muscles employed in raising the arm were never therefore called into action, and their tissue had degenerated; in some, as the supra-spinatus, the infra-spinatus, and the subscapularis, the muscular tissue was converted into a matter resembling fat; while the fibres of the deltoid seemed never to have been developed, so completely was its muscular tissue absent.

The scapula, clavicle, and humerus upon this side, which resembled rather those of a delicate female than of a robust man, were exhibited

to the members of the society, and are now in the Museum of the Royal College of Surgeons.

ART. 66.—*A Case of Ischio-rectal Abscess, caused by an Injury of the Nates, producing Symptoms resembling those of Dislocation into the Foramen Ovale, and those of Morbus Coxæ; with Remarks.* By R. P. HOWARD, M.D.

(Condensed from the *British American Journal*, Aug. 1848.)

James S., æt. 7 years and 9 months, of scrofulous diathesis and slender frame, was in perfect health until Sunday, the 23d April, on which day, when running, he fell on a large stone near the steps of his dwelling, and hurt the left buttock. Soon afterwards he entered the house, appeared "sick" and heavy, complained of "pain in the belly," and lay upon the sofa. He rested well that night, but continued sickly and dull the next day, with the pain in the belly as before. His mother gave him salts and senna, which somewhat relieved him; but he remained heavy, not inclined to play, but disposed to sit and lie. On the 27th instant it was observed, for the first time, that he walked lame, and that one leg seemed to be longer than the other. Having stripped and examined him, his father concluded the "hip to be out of joint." The child now told that he fell on a stone, and injured himself. During the night he complained much of his belly. The following day a practitioner saw the boy, and believing it to be a dislocation, attempted its reduction, but desisted for want of aid and appliances. That night he suffered great pain near the coccyx.

I saw him first on Saturday, the 29th instant, when I noted the following observations: he stands with the left knee advanced in front of the right, the limb abducted, with the foot rather everted, but not much so. No leaning forward and to the left, nor are the psoas and iliacus stretched. Walks without dragging the leg, bends the knee freely, and can support the body on it without pain, though he appears to lean chiefly on the right limb. The spine is not curved, nor is either shoulder obviously depressed. The left limb may be abducted without pain or force, and then seems to be longer than its fellow. No pain on striking the heel or trochanter major; none in front of or behind the capsule of the hip-joint; none on rotating the head of the femur in the acetabulum. Great tenderness on pressing lightly on the left buttock, and here there has been severe pain at intervals during yesterday and last night. The left nates is broader than the right, but not flatter, as if wasted, and the sulcus between it and the thigh not obliterated. The trochanter of this side seems to be lower than the opposite, and the internal condyle of the right knee lies in the fossa, above the internal condyle of the left, thus giving the semblance of lengthening by an inch and a half, though in reality the patellæ of both sides are equidistant from the anterior-superior spinous processes of the pelvis. The head of the femur cannot be felt in the perineum. Decubitus on the affected hip, with the knee flexed; in this position the hamstrings are tense; complete extension is difficult and painful, and the thigh cannot be as much flexed on the pelvis as the right one. Never had pain or stiffness in

the knee or hip-joint, nor occasional darting pains down the thigh, aggravated at night, nor did he previously, at any time, feel fatigued after slight exertion.

Skin hot; pulse 114, quick and firm; tongue furred white; appetite trifling since the accident; bowels costive. Ordered a black draught at once, and 2 grs. Dover, with 5 grs. hyd. cum creta three times a day; low diet; fomentation to the hips.

30th instant. As before; much heat about the hip; great tenderness of the left buttock, where the stone struck. On passing the finger up the rectum, I felt a swelling near the body of the left ischium, which was so sensitive that the child roared when I touched it; no motion or displacement effected in this swelling by rotating the limb; no fracture of coccyx, nor of ischium.

Diagnosis. Abscess forming in the ischio-rectal fossa. Ordered leeches, fomentations, and poultices to the back of the joint and buttock, and to have a teaspoonful, every two hours, of the following mixture:

℞ Ant. pot. tart. gr. ij;
Aquæ, ℥vij.

1st May. As I was indebted to the kindness of Dr. Crawford for the case, I informed him of its progress, and of my diagnosis. He visited the boy with me, and, after a close examination, coincided with the above view.

2d May. Rest much disturbed by the pain, which is increased even by the application of the poultices. Skin warm, but moist; pulse 114, not firm, as before; bowels costive, with much tenesmus; has a slight cough; the left buttock over the tuber ischii is tense, swollen, hot, and conveys to the finger the characteristic sensation of a forming deep-seated abscess. The margin of the anus is tumid, and exquisitely sensitive. Ordered a dose of castor oil, and a poultice of hops.

3d May. The irritability of the rectum persists. The left side of the anus, and a margin of about one inch of the perineum, on the same side, are of a crimson colour—œdematous—and present the appearance as if the abscess would point near the sphincter. The cough increased; pulse 112, small. The powders and mixture to be stopped, and the following substituted:

℞ Vini ipecac., ℥ij;
Spt. ætheris nitrosi, ℥iij;
Tinct. hyos., ℥i;
Aquæ, ℥v ℥ij;
℥ss to be taken every two hours.
A suppository of gr. ½ opium at bedtime, and a warm bath.

4th May. Rested better; had a rigor last night; appeared easier this morning; skin hot and moist; pulse 120, small; irritability of the rectum continues; cough looser. Ordered the evacuations to be examined for matter.

5th May. The abscess opened last night while at stool, and much healthy pus escaped with the fæces, giving immediate relief. The skin now is cool and moist; pulse 87; bowels yet irritable; the swelling about the anus subsiding; the pain gone; no stiffness of the joint;

stands erect, with both feet together; and walks without limp or pain. The orifice by which the pus escaped situated about one inch within the rectum.

13th May. The boy is well, and no signs remain about the nates of the recent injury. He walks naturally. The orifice in the rectum not to be felt.

I saw the boy on the 26th of this month. He was perfectly well, and used the left limb as well as the right.

REMARKS.

This case is interesting in several particulars; but chiefly as it exhibits the possibility of an *injury near the hip-joint terminating in an abscess*, producing symptoms, at first sight, resembling much those of *dislocation into the foramen ovale*, and not a little those of *morbus coxæ*, in its early stages; yet *establishing a clear diagnosis* between these several affections. For the sake of perspicuity, I will arrange the points of dissimilarity and resemblance, which are the most striking, in opposing columns.

A. POINTS OF DISSIMILARITY BETWEEN:—

Ischio-rectal abscess.	*Dislocation into the foramen ovale.*
1. Produced by a violent fall on the nates.	1. Produced by a weight falling on the pelvis, while the trunk is bent forward, and the thighs are separated from each other.
2. Lameness not observed till four days after the accident.	2. Lameness observed immediately after the accident.
3. Adduction of the limb easy and painless.	3. Adduction of the limb difficult and painful.
4. Toes and heel rested on the floor.	4. Toes rest on the floor, heel usually off the floor.
5. Apparent lengthening of 1½ inches.	5. Real lengthening from 1½ to 2 inches.
6. Apparent depression of trochanter major.	6. Real depression of trochanter major.
7. In the erect posture, no bending forwards, nor were the psoas and iliacus stretched so as to form a tense ridge, sensible to sight and touch.	7. In the erect posture, trunk bent forwards, and the stretched psoas and iliacus form a tense ridge on the side of the thigh, sensible to sight and touch.
8. Head of the femur not felt in the perineum, though a boy of "slender frame," and no swelling.	8. Head of the femur felt in the perineum, only in thin patients, and in the absence of swelling.

The progress, mode of treatment, and the result in this case were so manifestly opposite to what they would be in the dislocation, that it is needless to contrast them.

B. POINTS OF RESEMBLANCE.

Ischio-rectal abscess.	*Dislocation into the foramen ovale.*
1. The limb advanced and abducted.	1. The limb advanced and abducted.

2. Toes slightly everted.
3. Complete extension and flexion difficult and painful.
4. Hamstrings tense, and knee somewhat flexed.

2. Toes everted in some cases.
3. Complete extension and flexion difficult and painful.
4. Hamstrings tense, and knee somewhat flexed.

A. POINTS OF DISSIMILARITY BETWEEN :—

Ischio-rectal abscess.

1. Stiffness of the limb, &c., sense of fatigue and weakness after slight exertion were not complained of for some time previous to the lameness.
2. No pain at any time in the knee, nor down the thigh.

3. No pain in the hip itself, but seated near the tuber ischii.
4. Does not drag the limb when walking, but bends the knee freely.

5. Rests on the sole of the foot, and can bear the weight of the body on the affected limb.
6. Decubitus on the affected side.
7. The affected limb not different in appearance from its fellow.

8. The affected nates not wasted, nor the sulcus between it and the thigh at all effaced.

9. No real lengthening.
10. No pain in the hip or knee produced by striking the heel or trochanter major, nor by rotation of the limb.
11. Neither pain in front of, nor behind, the ileo-femoral capsule.
12. A very brief period elapsed, accompanied with acute pain, but little constitutional deterioration before suppuration, and subsequent relief resulted.
13. The cure after suppuration rapid and perfect.

Morbus coxæ.

1. Stiffness of the limb, and a sense of fatigue and weakness after slight exertion, complained of for some time previous to the lameness.
2. Pain in the knee, and occasional darting pains down the thigh ; generally worse at night.
3. Pain in the affected hip occasionally.
4. Drags the limb when walking, and carries the limb straight, as if there were no joint in the knee.
5. Rests on the toes and ball of the foot, and cannot bear the weight of the body on the affected limb.
6. Decubitus on the back or unaffected side.
7. The affected limb is found decidedly thinner, softer, and more shrunk than the other.
8. The nates of the affected side wasted, and the sulcus between it and the thigh more or less effaced.
9. Real lengthening.
10. Pain in the hip or knee produced by striking the heel or trochanter major, and by rotating the limb.
11. Pain in front of and behind the ileo-femoral capsule.
12. A protracted period elapses, accompanied with great increase of suffering, and constitutional deterioration, before suppuration, and subsequent relief result.
13. The cure after suppuration, when it does occur, is tedious, and at best imperfect.

B. POINTS OF RESEMBLANCE.

Ischio-rectal abscess.	*Morbus coxæ.*
1. Occurred in a youth of strumous habit, connected with external injury as its exciting cause.	1. Occurs in youths of strumous habit; it may (or may not) be connected with external injury as its exciting cause.
2. Stands with the affected limb somewhat advanced, and leans but lightly on it; the foot is slightly everted.	2. Stands with the affected limb somewhat advanced, and leans but lightly on it; foot is generally everted.
3. Apparent lengthening of the affected limb.	3. Apparent lengthening of the affected limb in the early stage.
4. Knee of affected limb sound.	4. Knee of affected limb generally sound.
5. Nates of left hip somewhat broader than its fellow.	5. Nates of affected hip broader than its fellow.
6. The left limb cannot be as much flexed on the pelvis as the other.	6. The diseased limb cannot be as much flexed on the pelvis as the other.

The abduction of the left limb, and the slight eversion of the foot, seem fully accounted for by the inflicted injury exciting the gluteus maximus, the gemelli, the pyriformis, and obturator-externus, to spastic action. Besides, this position would most relieve the pain resulting from inflammation, and its effects—effusion of serum, lymph, and pus. The apparent lengthening is explained by the circumstance that the patient rested chiefly on the sound limb, and advanced the other (which was also abducted) so as to steady the body; thus the pelvis necessarily followed the movement of the limb, and its transverse axis, which normally forms a right angle with the spine, now formed an oblique angle, and the limb would appear lengthened according to the obliquity of the angle. The tenseness of the hamstrings, and consequent flexion of the legs, was doubtless owing to the irritation seated at the origin of the biceps, semi-membranosus and semi-tendinosus muscles having been propagated to them, and exciting a spastic state of these; hence the difficulty and pain caused by complete extension and flexion of the limb. The breadth of the left buttock and its fulness was owing to the inflammation which extended towards the mesian line.

PART III.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

SECT. I.—MIDWIFERY AND DISEASES OF WOMEN.

ART. 67.—*On certain Displacements of the Unimpregnated Uterus.* By JOSEPH BELL, Member of the Faculty of Physicians and Surgeons, Glasgow.

(*Monthly Journal,* Sept. 1848.)

[THE displacements considered by the author in this paper are "retroversion," "anteversion," "retroflexion," and "anteflexion." Of the symptoms, causes, and diagnosis, as laid down by him, we do not think it necessary to give any account, inasmuch as his remarks do not in any respect differ from those already given by Drs. Simpson, Protheroe Smith, and others, whose communications on the same subject have appeared in our former Volumes. Of the treatment the author speaks as follows:]

The treatment of these displacements may be divided into two parts: 1st, the medical; 2d, the mechanical.

I. *Medical treatment.* It must appear self-evident, that when either enlargement or inflammation of the uterus exists, these conditions must be removed before we can expect to cure the patient.

It may be said that the enlargement and inflammation are the results of the malposition and not the cause, and that, consequently, it would be more rational to replace the uterus, and afterwards treat the effects. In answer to this I would submit the following observations:—1st. The relation assumed does not always exist; indeed I think it very rarely happens. 2d. Though you can replace the uterus, it will soon relapse into its abnormal position, unless the enlarged condition be removed. 3d. The uterus frequently cannot be restored to its proper place until it has been reduced in size. 4th. By removing congestion and hypertrophy, the organ will frequently, either spontaneously resume its natural site, or pregnancy occurs, and, subsequent to parturition, no relapse takes place. 5th. When you have reduced the hypertrophied condition, if the uterus does not, unassisted, resume its natural site, manual interference will then be more successful. Hence, in a practical point of view, it is of very little importance whether congestion and inflammation have preceded or followed the displacement.

[Judging from his own experience, the author states that when judicious means are adopted in conformity with the principles

above enunciated, few cases will require mechanical assistance. The following is an outline of the treatment which he has found most efficacious.]

1. Confinement to the recumbent position. Exercise not only causes an aggravation of the patient's sufferings, but protracts recovery.

2. Regular action of the bowels is of paramount importance. A loaded colon, by its pressure, increases the extent of the misplacement, and the passage of hardened fæces causes considerable irritation and congestion, both of the uterus and rectum. The laxative found most useful is either olive oil or an electuary of sulphur, cream of tartar, and molasses. Enemata generally prove injurious.

3. Local depletion is of great use, especially when there is much tenderness of the uterus, or severe pain about the loins. The application of a few leeches to the vulva or os uteri, once or twice a week, will be most beneficial.

4. *Mercury.* When the uterus is much enlarged and indurated, my chief reliance has been upon mercurials. At one time I generally prescribed hyd. c. creta. I now prefer the iodide of mercury in half-grain doses every eight hours. In my hands this has been most beneficial in reducing the size of the uterus. After mercurial action has been established, I find benefit from the iodide of potassium in a vegetable bitter infusion.

By this method of treatment the enlargement and inflammatory action of the uterus rapidly subsides, and the organ resumes, in many cases spontaneously, its natural position . . . . Improvement of the general health is of the utmost importance in the treatment of displacements of the uterus. Profuse menstruation must be checked, the action of the stomach, liver, &c., promoted. If the vagina be relaxed, the alum hip-bath will be useful.

II. *Mechanical treatment.* This may be divided into manual and instrumental. Several authors recommend the uterus to be replaced by the hand introduced into the vagina and rectum. With regard to the use of instruments, I can say little from personal experience. Various kinds of pessaries have been proposed, none more ingenious than that by Professor Simpson.

These, and especially the latter, may be serviceable in retroversion; but I doubt their efficacy in anteversion, and in flexions of the womb. I should be afraid that the presence of these instruments would cause inflammatory action. It is but justice, however, to state that Desormeaux and others consider that the irritation caused by common pessaries tends to cure enlargement of the uterus, by increasing the action of the absorbents. If this be true, Simpson's instrument (see 'Abstract,' Vol. VII, p. 315) may prove useful in two ways, viz. by removing hypertrophy, and maintaining the uterus in its proper place. . . . . The sponge pessary I have often introduced after the uterus has regained its normal size. I have never found its use to be required beyond a few weeks.

[The author, in conclusion, alludes to an article on the same subject, which we have reproduced in a former Volume, and illustrates his mode of treatment by several cases.]

Art. 68.—*On the Diagnosis and Treatment of Retroflexion of the Womb.* By T. Safford Lee, M.R.C.S.

(*Medical Gazette*, June 29, 1848.)

[The accompanying abstract forms part of a long communication which embraces all the points connected with the pathological history of this displacement. We, however, abstain from reproducing the symptomatology of this affection, as well as some other portions of the essay, for the reason given in the preceding article. The affections with which retroflexion may be confounded are thus spoken of:]

I. *Diagnosis.*—1. *Retroflexion may be confounded with retroversion of the womb.* In retroflexion, the os uteri looks downwards and a little forwards towards the outlet of the vagina; the cervix uteri can be traced perpendicularly upwards to a certain distance, and then it will be found to pass abruptly backwards, terminating in a painful tumour between the vagina and rectum. This position of the uterus can be fully verified by the introduction of the sound, which passes easily backwards into the tumour posteriorly, where it may be felt through the vagina.

In retroversion of the womb, there are several of the same characters observable as in retroflexion. The uterus is felt passing backwards into the recto-vaginal space, while the os uteri is drawn considerably upwards behind the pubes, producing retention of urine. Therefore, the position of the os uteri, and the effects produced by it, with the fact that retroversion occurs generally in pregnancy, sufficiently distinguish the latter from the former disease.

2. *It may be mistaken for an ovarian tumour, and is very often accompanied by one.* The ovary of one or both sides is frequently found to become enlarged, either by distension from engorgement, chronic inflammation, or cystic development; either of these states may produce a tumour between the rectum and vagina, and some exactly assimilate retroflexion of the womb—the enlarged ovary being mistaken for the fundus uteri. I have seen several mistakes arise from this cause. The indication under such circumstances is to endeavour to distinguish between the two, in order that proper treatment may be applied. Where the ovary is diseased, it can be ascertained by the introduction of the uterine sound into the cavity of the uterus, which may be placed in its natural position; and by moving the uterus cautiously, it will be found to have no connexion with the tumour which had been previously felt.

A singular case of this kind came under my notice. I found, on examination, a body which at first I mistook for the anterior lip of the uterus, very much elongated, but which proved to be the whole uterus pushed downwards and forwards into the anterior portion of the vagina, and nearly protruding from the vulva. Immediately behind this body a hard tumour was felt, and it was supposed that retroflexion of the fundus existed. I was unable to find the os uteri between this body and the tumour posteriorly. It then struck me, on examining more carefully the body in the vagina, that it had the feeling of the uterus. I could find, however, no os uteri; but after

drawing the finger over its lower part, I observed a slight depression, to which I applied the uterine sound, which ultimately passed into the cavity of the womb. This at once threw considerable light upon a very uncommon displacement. After we had thus found out the character of the tumour in the vagina, the posterior one was easily distinguished; for by drawing the uterus forwards by the uterine sound, it was found to be unattached to that body, and that its movements were quite independent of it, proving most assuredly that it was an enlarged ovarian tumour, and that it had caused the uterine displacement.

3. *Retroflexion of the uterus may be mistaken for a fibrous tumour of the posterior wall of the uterus.* A gentleman requested me to see a patient whom he supposed to be labouring under retroflexion of the womb. On the first examination of the patient, it very much resembled a displacement of that character. The os uteri was placed forwards, and looking downwards, and immediately behind the cervix was a tumour of rather large size, very painful to pressure, and presented, between the cervix and the tumour, apparently the "*curve*" which connected them. All these symptoms favoured the idea that it was retroflexion of the fundus; but, on examination with the uterine sound, the uterine canal was found directed *forwards*, and merely connected with the tumour posteriorly, which was of fibrous character and imbedded in the posterior wall of the uterus.

II. *Prognosis of the retroflexion of the fundus.* The difficulty of treating this disease exists in its liability to return. The patient may be relieved of her pain while the uterus is kept in its natural position by mechanical support; but take that away, and there is great risk of its returning to the flexed position. Many, however, do not, but are perfectly cured. There is no danger to life with this disease; but if it continues, the pains felt in the pelvis, aggravated periodically with the menstrual periods, affect the general health, and produce disease.

1. *The effects produced by the flexion of the womb.* The first, as has been well pointed out by Dr. Rigby, is sterility. The constriction of the cervix prevents the admission of the semen into the cavity of the womb, and thus becomes a mechanical hinderance to conception. I have observed many patients who have laboured under retroflexion of the fundus for many years, and during that period have never been pregnant, but have become so quickly after the uterus has been replaced. In one instance, a married woman, who had suffered from flexion of the uterus after a former labour, and who formerly conceived very quickly after her previous confinements, remained barren during the existence of the disease, and continued so until it was cured; after which she again became pregnant, and was delivered of a full-grown child.

2. *Retroflexion of the uterus induces engorgement and chronic inflammation of the ovaries, more especially in the left one.* Dr. Rigby,* who first described this complication, states that in thirteen cases the fundus was flexed towards the left in nine: one was towards the right; the other two backwards, or not observed. The fundus, from its position

* Med. Times, Dr. Rigby's Reports.

backwards, presses upon and irritates these organs, producing chronic inflammation and deranged discharge, and in these cases usually there is membranous dysmenorrhœa.

3. *Retroflexion of the uterus produces engorgement of the neck of the womb, which is often followed by slight ulcerations.* These are not frequently extensive, but are confined principally to that portion of the labia which surrounds the orifice of the womb. By the speculum, the ulceration can be seen to be small, and scattered over the surface within and about the lips of the cervix. These disappear after the replacement of the fundus: but, if numerous or large, they require treatment before other means are applied. Dr. Beatty, in the 'Dublin Journal,' for Nov. 1, 1847, gives three interesting cases, in which, by the treatment of the ulceration, he succeeded in curing the retroflexion.

III. *Treatment.* In the treatment of the retroflected womb, several circumstances may demand attention—as to the state of the patient, the period of the existence of the disease, and the greater or less amount of flexion of the uterus itself.

The virgin and the married woman suffer differently under this affection; the one presenting its symptoms without much irritation, while the other gives evidence of considerable disturbance. A knowledge of the period during which the disease had existed aids the diagnosis, and renders the prognosis favorable; and those cases which have received treatment quickly after the disease had commenced derive greater benefit from it than those which have been neglected.

The state of torsion varies considerably in different cases: in some the fundus is merely thrown backwards, while in others it is completely flexed upon the cervix uteri; and, lastly, the state of the bowels and the general health are all important considerations in this disease.

When the fundus is partially retroflected the symptoms are slight, and the replacement of the womb may be attained by its own natural efforts, aided by depletion and position. The cases I have reported are evidences of that fact, and those detailed by Dr. Beatty corroborate the same statement. But although this treatment has been successful in some cases, there are others which remain in the reflected state after it has been fully applied, and require other and more efficient means.

The severe cases of retroflexion very seldom admit of the return of the womb to its natural position without the assistance of mechanical apparatus; and, although the preliminary means may be used with benefit in reducing the engorgement of the womb, the mechanical ones have been found to be most effectual in altering its position. The best mode of applying mechanical support to the uterus is by the use of an instrument proposed by Professor Simpson.

[Of this instrument we have given a full description, together with an illustration, in our last Volume (page 315), and we, therefore, omit the author's remarks on the subject, excepting such as refer to its mode of application, which are more fully descriptive than have been before given. These are as follows:]

The angular form of the supporter described presents considerable difficulty in introducing it into the uterus, and the small space for manipulation in the vagina adds considerably to it; so that in no case is it an easy operation. The patient should be placed on the left side, with the knees drawn quite upwards. In this position she must be placed on the edge of the bed, and the instrument applied. After having inserted a handle into the vaginal sheath of the uterine portion of the supporter, it is to be introduced into the vagina, with its angular space looking towards the sacrum, the point to be directed to the os uteri, in the *abnormal position of the uterus*. The right hand should now press on the perineum, and as far as possible enlarge the opening of the vagina, in order to allow the passage of the bulb into the vaginal canal; the point of the instrument will then be directed into the canal of the cervix. When this part of the operation is accomplished, the finger should be applied to the tumour posteriorly, and pushed gradually upwards, in order to relax the constriction of the cervix; the supporter then passes to its full extent. With a little manipulation it is turned forwards, and the operation is completed; the tapes are tied, and the patient put to bed. The introduction of the supporter presents considerable difficulties: the patient most frequently complains of greater pain when the bulb is passing into the vagina than at any other portion of the operation; and in some cases the opening is so small that the operator is obliged to suspend its introduction until the orifice of the canal is more dilated. After this difficulty has been overcome, the canal of the cervix presents another of more frequent occurrence; the surface of it is so irregular, from its flexed state, that the supporter is unable to pass, and its contraction where the fundus is flexed upon the cervix is so small that it resists the entrance of the supporter. Under these circumstances, the "dilator" ought to be used to enlarge the orifice, and repeated several times before another attempt is made. There is usually pain on replacing the uterus; and, while being reduced, there is danger of the fundus coming in contact with the promontory of the sacrum. To avoid this, the uterus should be pulled down into the vagina, and the pain will be trifling.

Before applying the supporter itself, the uterine sound should be used, in order to reduce the swelling and engorgement of the cervix uteri, and to accustom the womb to the presence of a foreign body. When the supporter has been applied for some time, examination ascertains that the induration and swelling of the cervix have almost entirely disappeared; that the uterine tissue felt between the finger and supporter is thin and healthy; and the ulcerations, if any exist, require no treatment, and usually disappear. For a few days the patient should remain in bed, and lie as much as possible in the prone position, avoiding all irritation, and even afterwards take but moderate exercise. If the instrument is borne well, the disease will most probably be permanently cured by its assistance. The patient will be enabled to walk with ease, and attend to the ordinary duties of life. Ladies who have had the supporter applied have travelled great distances, and poor people have returned to labour for their families, who were entirely unable to do so before the supporter was applied.

In the favorable cases we have referred to, no pain or irritation exists, and a cure of the disease is generally the result. But there are other cases in which the uterus will not bear the irritation of a foreign body in its cavity, and it produces sometimes serious results. The patient, after a few days, begins to feel pain over the pubes, extending to the abdomen, which soon becomes tympanitic; the bowels are usually very much relaxed; diarrhœa is produced, and an offensive matter, accompanied by shreds of membrane, is copiously discharged. The tongue becomes furred and dry; the countenance sinks, and becomes anxious; the skin is dry; and all the appearance of an irritative fever is the result. On examination, the vagina is found hot: the instrument gives great pain on being moved, and ought at once to be removed. After this has been done, the symptoms decrease somewhat, but are to be treated usually by the application of heat, aided by that of a few leeches to the abdomen, warm vaginal injections, and attention to the bowels. These remedies soon restore the patient to health, but the uterus is afterwards found to be retroflected. I have never seen a more serious result arising from the general excitement of the system than the temporary symptoms themselves; and I have applied the instrument a second time, at a future period, without pain, and a successful issue.

In all cases in which the supporter is used, the patients suffer some pain at their menstrual periods, and in each case I have observed that the discharge was always profuse, lasting also longer than its usual period. After the discharge ceases, the pain becomes less, and the patient resumes her usual health. When the instrument has been withdrawn, and the retroflexion cured, the catamenia appear without pain; and, after many inquiries, I find that the discharge is not profuse, but of its ordinary quantity, at successive periods. In some cases where the instrument is worn, it produces considerable pain in the groins and hips. This happens about ten or twelve days after its introduction, and depends upon the lower portion of the cervix having encircled the bulb of the instrument. On examination the cervix will be found to have passed over the bulb, and grasped it firmly. This is to be replaced, and the pains will cease.

Frequently the instrument requires its position to be altered: it may be too much forwards, and irritate the bladder; or too much backwards, and interfere with the rectum; or the bulb may be too low in the vagina. These misplacements give a good deal of pain, and require to be rectified. They generally arise from the patient allowing the back tapes to be too much loosened. The period the supporter ought to be retained, in order to be effectual, varies considerably—from a month to six months, or to a year. If it is borne well, the longer it is retained the better; but this depends upon circumstances. If the instrument can be introduced easily, and its effects on the uterus are slight, a month has been sufficient to remedy the retroflexion; but if it is with difficulty introduced, and the flexion of the uterus be considerable, the longer the time the instrument is retained the better. The usual period in those cases which have come under my care varies from two to four months; but I have one now under treatment who has had the instrument applied for five months, and she states that it gives

her such relief that she intends to retain it for some time longer. I have heard of another case where it was retained in the uterus for more than a year, and the patient dying of a different disease, was examined. After death, the uterus was found to be healthy—still, however, retaining the instrument. Of twelve cases to which I can refer, which were cured after treatment by the supporter, I find that four of them had the instrument applied for one month, four for two months, two for three months, one for four months, and one for five months.

During the application of the supporter astringent lotions should be applied to the vagina, which is at first greatly relaxed, but soon regains its contractile power, and is much smaller at the end of the treatment, when it becomes able to support the uterus itself more effectually.

After the supporter has been removed, the bowels should be frequently relieved by the use of purgative medicines; and by thus keeping the rectum free, the cure may become permanent. It is very important also to favour the replacement of the uterus by the patient retaining the prone position, which is best effected by an angular couch, which has been used and recommended by Dr. Rigby, where the patient can use the prone position, and still amuse herself with either reading or working.

On reviewing the foregoing observations, we have come to the following conclusions:

1st. That retroflexion of the uterus is much more common than it has hitherto been supposed to be by the profession.

2d. That the disease may exist without causing any marked symptoms.

3d. That the disease, being known to exist, may disappear without treatment.

4th. That the disease may be cured by depleting means, accompanied by the replacement of the womb by the uterine sound.

5th. That the uterine sound, which was introduced to the profession by Professor Simpson, is a very valuable instrument in the diagnosis of the disease.

6th. That protrusions of the rectum, and great agony on passing a motion, usually depend upon the retroflexion of the uterus, and are cured on its replacement.

7th. That the disease produces considerable hysterical symptoms both in the virgin and married state, which are entirely removed after treatment.

8th. That retroflexion produces, and is the cause of, dysmenorrhœa—

a. By the expulsive pains in many cases caused by the exertions of the uterus to expel the catamenial discharge from its cavity.

b. By producing pressure and irritation in the ovary, the discharge becomes accompanied with shreds and membraneous exudations.

9th. That Professor Simpson's supporter, in the treatment of this disease, produces the happiest effects, in entirely removing the local symptoms; and, in the majority of cases, produces a cure; but it must be remembered that in some cases the uterus will not allow of the irritation of a foreign body, which must then be removed, and other

treatment substituted; and, lastly, that the instrument may be retained for a considerable time—for months—without giving any pain or uneasiness to the patient; and yet, on its withdrawal, the uterus may return to its retroflected state.

Art. 69.—*On Inflammation and Abscess of the Uterine Appendages in the Non-puerperal state.* By Henry Bennet, M.D.

(*Lancet.*)

[The author premises his paper by an historical notice of the affection, commencing with the earliest writers, and also with an anatomical description of the parts engaged, of neither of which is it necessary to make further mention. He then proceeds to describe the seat, causes, symptoms, and progress of the disease, as follows:]

Seat. Inflammation occurring in the region which I have described may attack the cellular tissue alone, in which case it is a purely phlegmonous inflammation, or the ovaries alone, or the Fallopian tubes alone; or it may attack all together. In either case, the peritoneum itself may or may not be compromised. Owing to the anatomical localization of these organs, to their lying in the same anatomical region, and their having the same anatomical relations, the symptoms and history of inflammation in them are so similar that it would be difficult, if not impossible, and certainly useless, to attempt to describe inflammation in each separately. I shall, therefore, treat generally of inflammation in this region, pointing out, as I proceed, any difference which may exist, and which is really susceptible of being appreciated.

The peritoneal folds themselves are very seldom attacked in non-puerperal inflammation of the uterine appendages. When inflammation occurs in this region, *after* parturition, there is a great tendency in the peritoneal membrane to take on the inflammatory action, as is the case when the uterus itself is then the seat of inflammation. In the unimpregnated non-puerperal condition, on the contrary, there is very little tendency to inflammation in the peritoneum, and the organs contained between its folds may remain inflamed during months or years without its becoming compromised. This is a singular pathological fact, but one which is equally true when applied to inflammatory affections external to the peritoneum in any other point of the pelvic and abdominal cavities. Even when peritonitis does complicate the attack in the non-puerperal state, it seems rather to have a tendency to localize than to extend its action, the contrary to which obtains in the puerperal condition.

In non-puerperal inflammation of the lateral ligaments, the disease is very evidently limited, in most instances, to the cellular tissue and to the organs contained within them, and does not extend to the free cellular tissue of the pelvic cavity. This circumstance induces me to think that in the puerperal form the disease is, generally speaking, similarly limited at first, although such is not the prevailing opinion.

Causes. The causes of inflammation of the lateral ligaments in the non-puerperal state are the same as those of acute metritis. Any physiological or pathological action which is calculated to exaggerate the vitality or to arrest the functions of the uterine system, may be

followed by this form of inflammation. Inflammation may attack the lateral ligaments directly or indirectly; directly, when they are primarily affected—indirectly, when the uterus is first inflamed, and the inflammation extends from it to the ligaments. The cellular tissue is evidently much the most frequently the seat of the disease, as might be anticipated. The cause which, in the very great majority of cases, gives rise to the inflammatory attack is arrested menstruation. I have also repeatedly seen it manifest itself in persons labouring under chronic inflammation and ulceration of the cervix. In two or three instances I have known it follow a severe fall. Even in these cases, however, the appearance of the inflammation of the uterine appendages generally takes place in connexion with menstruation.

Symptoms. The symptoms of inflammation of the uterine appendages are, at first sight, very similar to those of acute metritis. There are the same general febrile symptoms, the same severe pains in the lower hypogastric region, and, on attempting to walk or to stretch the body in the erect posture, the same abdominal tenderness and sensation of weight deep in the pelvis, the same vesical irritation and difficulty in defæcation. On a closer inspection, however, we may appreciate some dissimilarities. The pain is greatest at a little distance from the median line, in the right or left ovarian region, more frequently in the latter. If the patient can bear pressure, and the abdominal parietes are not too thick or too rigid, a deep-seated swelling or tumour is frequently perceived in the ovarian or iliac region. Sometimes the tumefaction is perceptible to the eye from the first. The presence, however, of these symptoms is seldom sufficiently conclusive to enable the practitioner to distinguish inflammation of the lateral ligaments from acute metritis.

In order to clear up the doubt that otherwise must necessarily remain respecting the true nature of the disease, it is indispensable that a careful digital examination should be made. This is, in my opinion, effected most satisfactorily, the patient lying on her back, the knees elevated or flexed. The forefinger being introduced into the vagina, the elbow should be depressed, so that in penetrating it may adapt itself to the axis of the pelvis. The pulp of the finger may thus be carried underneath and round the cervix, which should be carefully and accurately examined. By then pushing back with the finger the cul-de-sac of the vagina, where it is inserted on the cervix, the state of the body of the uterus, of the adjoining uterine organs, and of the pelvic cavity generally, may be ascertained with extreme accuracy, especially if the left hand is applied at the same time over the lower hypogastric region above the pubis.

When this mode of examination is adopted in the healthy female, the bladder being previously emptied, the finger may push the vaginal cul-de-sac before it on the side of the uterus for an inch or two, and may be made to approximate within a very slight distance of the hand applied externally, and that without giving the slightest pain. The practitioner feels, with the greatest distinctness, that his fingers are only separated from each other by the thickness of the abdominal parietes, and by tissues (the lateral ligaments) which present no density or resistance. When the tissues contained in the lateral liga-

ments, cellular tissue, ovaries, or Fallopian tubes, are inflamed, thickened, and indurated, the state of things is very different. On attempting to push back the vagina on the side of the uterus we find an unusual resistance. The vaginal cul-de-sac has disappeared, and resting on the side of the cervix and body of the uterus there is an indurated swelling, very different from what obtains on the other or healthy side, supposing disease to exist on one side only, as is most frequently the case. Pressure on the indurated tissues is attended with very great pain, and there is a marked increase of the natural heat of the parts. On carrying the finger behind the inflamed tissues, whilst the abdomen is gently depressed with the left hand, we ascertain that the inflammatory tumour, situated between the hands thus placed, is moveable and quite distinct from the parietes of the pelvic cavity. This tumour is generally applied, as it were, to the side of the uterus, so that it only constitutes one mass with that organ. Thence it is, no doubt, that inflammation in the lateral ligaments is generally confounded with metritis, even when a digital examination is resorted to, and the presence of an inflammatory swelling recognised.

If, notwithstanding a careful vaginal examination, there are doubts as to the nature and extent of the swelling, the uterus and annexed organs may also be examined with benefit digitally, through the rectum.

Progress and termination.—Acute metritis, in the non-puerperal state, generally ends by resolution or by passing into the chronic stage; suppuration is a comparatively rare event, owing to the very small quantity of cellular tissue existing in the structure of the uterus. Inflammation in the lateral ligaments, on the contrary, generally ends in suppuration. It is, in reality, in most cases, a purely phlegmonous inflammation; and the great tendency of phlegmonous inflammation to terminate by suppuration is an axiom in pathology. Although much less liable to end in suppuration than inflammation of the cellular element, ovaritis is also more frequently followed by suppuration than acute metritis. Suppuration may, consequently, be looked for in the course of a few days from the onset of the inflammation, unless the latter has been checked by early and energetic treatment. A prepared and attentive observer may recognise suppuration having taken place by rigors and other symptoms that accompany internal suppurations, by the lull that follows in the general and local symptoms, and sometimes by a deep-seated sensation of fluctuation perceived through the vagina, or even through the abdominal parietes.

Once the pus has formed, being closely confined in the region which has been described, if it is not absorbed, as is sometimes, although rarely the case, it endeavours to find a vent. Adhesive inflammation connects the phlegmonous tumour with the vagina, rectum, abdominal parietes, or bladder; and in the course of a variable period, but generally before the acute inflammatory symptoms have subsided, the pus finds an exit in one or more of these directions. It is almost invariably by the upper portion of the vagina, or by the rectum, that the pus escapes in the non-puerperal form of inflammation. I can scarcely recall to mind an instance in which I have seen the pus make its way through the abdominal parietes in non-puerperal inflammation, except

in a case or two in which there was a serious and permanent cause of disease in the uterine appendages, such as suppurated tubercles. When, however, this is the case, it is only after the inflammatory action has lasted for weeks, or even months, that the pus reaches and perforates the abdominal integuments; and nearly always long before the external perforation takes place it has found its way out of the pelvis through the vagina or rectum. The emptying of the abscess into the bladder is of still less frequent occurrence, and is, likewise, generally preceded by the formation of a vaginal or rectal opening. Sometimes the abscess will open into all these directions successively. In some instances the pus appears to escape from the neck of the uterus, as if the abscess had emptied itself into the cavity of that organ. I think, however, that when this is the case the real explanation is, that the phlegmonous tumour of the uterine appendages is complicated with metritis; and that an abscess, formed in the walls of the uterus, has thus opened into the cavity of the organ. An abscess primitively formed in the lateral ligament would be scarcely likely to work its way through the thick unyielding wall of the uterus; at least not unless the uterus participated in the inflammatory action.

Generally speaking, as I have stated, the abscess opens into the vagina or rectum, or into both. That such should be the case is at once accounted for when we consider the position of the phlegmonous tumour with reference to these organs, with which it is in immediate contact. The perforation mostly occurs during some exertion, such as a fit of coughing, or the act of defecation, and in so latent a manner that it is not perceived nor mentioned by the patient, unless her attention is previously directed to the point by her medical attendant. This, however, is seldom the case in NON-puerperal abscesses, as he is not himself aware of the nature of the disease, and believes his patient to be merely labouring under metritis. The passage of even a considerable quantity of pus from the vagina is generally thought by the patient to be only an increased flow of the whites; and the escape of pus along with the fæces is still less likely to attract her attention. Women, from a natural feeling of delicacy, require to be closely questioned with regard to uterine symptoms, seldom giving any information respecting themselves spontaneously. Sometimes the perforation is accompanied by a bursting sensation, of which the patient is perfectly sensible. It may take place within a few days of the onset of the inflammation, or it may be weeks before it occurs. The quantity of pus passed varies from a few drachms to half a pint, or more.

It is owing, no doubt, to the formation and escape of the purulent collection from the cavity of the pelvis thus taking place in so insidious and latent a manner, that unless carefully looked for, it is neither perceived by the patient nor her medical attendant, that these cases have hitherto been generally overlooked, and that the more severe forms and instances of the disease have alone been recognised and recorded.

The escape of the pus through the vagina is the most favorable manner by which it can make its way externally. Its presence, no doubt, occasions a certain amount of irritation of the mucous surface over which it passes, but that irritation is scarcely ever considerable. The next most favorable termination is the penetration of the pus

into the rectum. When this occurs there is generally great irritation of the intestinal mucous membrane. Either the ulcerative inflammation of the coats of the rectum, or the presence of the pus, seems to be attended, in most instances, by a considerable degree of dysenteric irritation of the lower bowel, which sometimes lasts several days. In both cases the openings by which the pus penetrates into the rectum and vagina are generally small. In the vagina we cannot frequently detect the precise spot at which the pus has perforated the parietes; nor is it easier to discover it with the speculum. An instrumental examination, however, is scarcely ever necessary, or even admissible, in the acute stage of this disease, owing to the tenderness of the vagina and internal tissues.

The escape of the pus by the parietes of the abdomen is always preceded and accompanied by considerable inflammatory swelling, and inflammation of the surrounding tissues and of the abdominal walls. The phlegmonous tumour is a long while in reaching the exterior, and gradually involves all the structures which separate it from the skin; thus giving rise to an extensive inflammatory tumour of a very painful and distressing nature. The sympathetic and reactional symptoms are necessarily very severe in these cases. But the entire series of symptoms, both general and local, which attend the cases in which abdominal perforations occur, may be considered as more especially characteristic of the puerperal form of the disease, as they are scarcely ever met with apart from it.

When the pus has fairly escaped from the pelvic cavity a marked change is observed in the state of the patient. There is a decided lull in all the symptoms. The deep-seated pelvic pains diminish, as also the abdominal tenderness and swelling, and the febrile symptoms rapidly subside. In very many cases the improvement is so rapid, especially when the abscess has opened by the vagina, that the patient is soon considered quite convalescent, and in hospital practice discharged as cured. This improvement, however, although real, is very deceptive with reference to the future. On making a careful digital examination of a patient so situated, we find that the tumour on one side of the uterus is exceedingly diminished in size, that it is no longer so sensitive to the touch, and that there is less heat and tenderness in the upper part of the vagina, and on the side which is in contact with the phlegmonous swelling. But although thus less in size and less inflamed, the inflammatory tumour is, nearly always, still perceptible. Part of it has melted and suppurated, but part remains in a state of semi-chronic inflammation and induration, as is usually the case with suppurated phlegmonous tumours.

The symptoms which pertain to a chronic uterine inflammation will, consequently, be found *still* to exist, on a close examination. Pain, heaviness, and bearing-down deep in the pelvis; tenderness, pain, and often swelling, in one or both of the ovarian regions; pain in the lower part of the back; inability to stand or walk for any time, and especially to go up and down stairs—these symptoms may be more or less apparent.

The orifices by which the pus has escaped into the vagina or rectum generally remain open, and thus allow the pus to discharge itself as it

is formed. Sometimes, however, they close in the course of a few days. When this is the case, if pus continues to be formed, it collects again, forms an abscess, and before it again escapes, by ulcerative inflammation, reproduces, generally in a mitigated form, the acute inflammatory symptoms previously experienced.

Were these inflammatory tumours not exposed to the influence of perturbing causes, they would, no doubt, in most instances, gradually become absorbed, and the relapses just described would be slight and unfrequent. Such, however, unfortunately, is not the case; at least in a large proportion of the cases met with. The molimen hæmorrhagicum which accompanies menstruation, or any other exciting cause, may arouse the dormant inflammatory action in the still indurated and tumefied tissues. When this occurs, the acute symptoms of the disease reappear; matter again forms, and forces its way into the vagina or rectum; in the latter case again giving rise to dysenteric symptoms.

These exacerbations, or returns of acute disease, become less and less frequent as the inflammatory tumefaction of the uterine appendages diminishes, and as the diseased tissues return to their natural condition. The disease, however, is essentially chronic; and a female who has suffered from inflammation and suppuration of the lateral ligaments, even in its mildest form, may be from several months to one or more years before all trace of local inflammation has disappeared, and before she can be said to be radically well. During this lengthened period she is never quite free from symptoms of uterine irritation, and remains subject, at intervals more or less distant, to the acute exacerbations which I have described.

Whilst thus suffering, the menstruation is always more or less modified. Sometimes it is absent for months; sometimes its appearance is only delayed for a few days or weeks. Generally speaking, the menstrual period is curtailed, the quantity of blood lost is diminished, and great pain is experienced during the entire period of the menstrual secretion.

Long before the local tenderness gives way, and before the patient can be pronounced well, all traces of induration or swelling, as appreciated by the touch, either through the vagina or through the abdominal parietes, will be found to have disappeared. The formation and escape of matter comes to a close at even a much earlier period, before the induration has melted and ceased to be recognisable to the touch.

Such is the succession of morbid symptoms observed in the milder or non-puerperal form of inflammation of the uterine appendages. Although generally overlooked, owing to a want of knowledge of the pathological facts which these symptoms represent, this affection is, in reality, as easy to recognise and to follow, in the evolution of its phenomena, as many better known diseases.

Art. 70.—*Bitartrate of Potash in Uterine Hemorrhage.*—[Dr. Silvester speaks highly of the virtues of this medicine. He observes:]

Everybody is acquainted with its cooling, diuretic, and generally aperient properties, but few are aware of its singular power in controlling uterine hemorrhage. It is not without effect in bleeding from other organs, but I will reserve my observations on this branch of the

subject till another opportunity, and restrict myself for the present to a few remarks on its efficacy in restraining chronic sanguineous discharge from the womb.

Uterine hemorrhage may arise from various causes,—separation of the placenta or ovum, diseases of the heart and liver, polypus, malignant ulceration, fungoid growths, &c.; the bitartrate in such cases is equal to any other remedy in checking the discharge, at the same time that it allays feverishness, and tends to keep the bowels regular. But it claims no superiority in these respects over many other medicines; it is in menorrhagia, or excessive menstrual discharge prolonged continuously beyond its usual duration, or appearing at irregular intervals, that it displays its unequalled efficacy. Sometimes after abortion the patient continues to suffer from an occasional discharge, which gradually ceases after inflicting much injury on the general health, and is with difficulty cured by tonics and astringents; it will in such cases be found to effect an almost instantaneous beneficial change. There are also instances met with in practice of a sanious or pale secretion from the uterus, sometimes treated as leucorrhœa by local astringents; they are accompanied by venous bruit, and are examples of imperfect menstruation. These yield rapidly to the bitartrate of potash, and, singular to say, the patient often recovers perfectly without the administration of iron or other tonics. The foregoing description of the forms of disorder in which the salt alluded to produces a specific effect, will be sufficient for the information of the medical practitioner, who, after a little experience, cannot fail to detect the proper cases for its employment. It would be tedious and irksome to relate individual illustrations in confirmation of the opinions advanced; they are easy of recognition, and the specific property of the drug is so conspicuously evident, that it is probable many will be able to bear testimony to the truth and accuracy of what has been now stated.

Without pretending to explain the nature of the salutary impression made by this agent on the solids or fluids of the body, I may be allowed to observe that when, as in chronic discharges, the blood is dark-coloured, it often becomes of a brighter hue soon after the commencement of the treatment.

Prov. Journal, Sept. 6th.

Art. 71.—*Case of Excision of the Anterior Lip of the Os Uteri, with Ulceration.*—[Dr. Clay narrates the following case which occurred in his own practice:]

Priscilla T——, æt. 45, applied to me for what she termed a bearing-down, but had been told there was no cure for her. She had come some distance. I sent her into my private hospital, where I went to examine her by the speculum, and found what she had described a bearing-down to be a very peculiar elongation of the anterior lip of the os uteri, the tip of which was ulcerated, the elongated part was at least two inches. It was accompanied with prolapsus, and caused her considerable annoyance, interfering with defecation as well as the passing of urine, the tip of the elongated part, as well as the opposite lip of the os uteri, was slightly ulcerated. Her constitution had been sinking for some time. Leucorrhœal discharges, want of appetite,

yellow tinge of the skin, and general weakness, all indicated considerable depression, increased by being told that her case was incurable. I commenced my treatment by the exhibition of quinine and citrate of iron internally, with an occasional blue pill, as the functions of the liver (as is usual in such cases) were sluggish; and introduced a medicated pessary of iodide of lead every night, consisting of

℞ Iodidi plumbi, ℈f,
Ceræ flavæ, ℈v,
Axungia, ʒvj ℥ : div. in pessos iv.

After a few days the ulcerated surfaces put on an improved appearance, and her general health was much better. I thought, however, the cure would progress still more rapidly if the elongated part was excised, which was done, and the tinct. ferr. mur. used to the surface twice a day by means of a sponge tent, still continuing the quinine and citrate of iron, with blue pill internally. In the course of three weeks the parts had assumed their normal position so nearly, and so little of the ulcerated surface remained to be healed, that I sent her home with a zinc wash, to return in about ten days. The case is now well.

Art. 72.—*Acute Peritonitis simulated by Prolapsus Uteri.*—Dr. Meigs states that he has met with about thirty cases in which excessive neuralgia of the whole abdomen, with sensibility equal to acute peritonitis, proceeded solely from a slight degree of prolapsus uteri. One of these cases he subjoins:

On the 5th of July, 1828, Dr. Meigs was called to a mulatto woman, æt. 30. She was lying on her back, with the knees drawn up, and supporting the bedclothes with her hand, lest they should press upon the abdomen. She had suffered this pain for several hours, and had short, quick respiration, &c. Upon hearing her account, Dr. Meigs was at first convinced that she was labouring under intense peritonitis, but upon examining the pulse, which he expected to find tense and corded, he was much surprised to discover that it was nearly natural as regarded frequency and hardness. This incongruity led to further inquiries. She had borne several children. Dr. Meigs (he does not say why) now became convinced that her pains were those of prolapsus; and examining per vaginam, he found the uterus low down. By pushing up this, the abdominal pain suddenly ceased, and the woman could bear pressure without shrinking. The pain was reproduced by allowing the uterus to descend.

Females and their Diseases, p. 132.

Art. 73.—*Prevention and Treatment of Abortion.* By Dr. Tyler Smith.

(*Lancet*, April 29, 1848.)

[The following remarks are in continuation of the extract from Lectures on Parturition, contained in our last Volume.]

Careful and minute attention to all the various causes of abortion is the true basis of preventive measures. In the prophylaxis of abor-

tion, I propose to follow the order I have already observed in treating of its causes, dealing with the palliation or removal, in the first place, of the ex-centric; in the second, of the centric causes of this accident. I use the word abortion in its largest sense, including every variety of premature expulsion of the impregnated ovum.

With reference to mammary irritation, it is hardly necessary to observe that weaning ought always to take place as soon as the occurrence of pregnancy, during lactation, becomes evident. Gestation and lactation ought never to be permitted to go on at the same time in the same individual, or the child at the breast and the child in the womb must mutually suffer. After weaning, mammary irritation is at once removed, and instead of the exhausting and abnormal irritation in the direction *from* the breast *to* the uterus, there comes into operation the healthful and physiological stimulus or synergic action *from* the uterus *to* the breasts, which prepares them for the new lactation when the fœtus in utero has arrived at maturity.

With respect to dental irritation, it is just necessary to bear in mind that this is occasionally, and in rare instances, a source of uterine disturbance. When the processes of dentition (the appearance of the wisdom teeth) and utero-gestation meet in the same subject, the alveolar irritation should be kept under by leeches or scarification, on just the same principle as we should lance the gums during excito-motor disturbance in the first dentition, to prevent spinal erythismus and convulsions. In the caries, so common in pregnancy, and which often attacks several teeth at the same time, extraction of the diseased teeth should be avoided as much as possible. In the first place, as the pain involves the nerves of many teeth, oftentimes the whole of one side of the jaw affected being neuralgic, the extraction of one or two of the offending teeth will not afford permanent relief. The uterine irritation remaining, the pain is generally transferred, after extraction, in all its intensity, to the nerves of the neighbouring teeth. In the second place, caries and toothache do not affect the nervous system so much as the sudden violence and the emotional disturbance of extraction. It is truly distressing to witness the almost continual misery in which some women pass through the epochs of utero-gestation and lactation from faulty teeth. This is particularly the case with the wealthier classes of patients; and the fact should urge very strongly upon parents the necessity of attention to the permanent dentition in young girls, for with this process the health of the future mother is most intimately connected.

The preventive measures relating to vesical irritation are very simple. In the most formidable irritation of this kind—the concurrence of calculus with pregnancy—and which is necessarily extremely rare, nothing but palliative measures can be resorted to during gestation. The cure must be left to the unimpregnated state. Strangury and urinary deposits, attended with pain and irritation, must be treated carefully, but just as in the unimpregnated condition. Distension of the bladder during pregnancy should be avoided, and actual retention relieved regularly by the catheter. Attention to the state of the bladder is the more necessary in pregnant women, as the accidental distension of this viscus may, in the early months of pregnancy, cause

retroversion of the uterus, and this, in turn, will produce permanent retention of the urine; the conditions of the bladder and uterus thus uniting to occasion danger of abortion.

I now come to the preventive measures which relate to ovarian irritation. Here our cautionary plans should be chiefly confined to the catamenial or periodic dates. Patients suffering from severe ovarian irritation during pregnancy should be treated in the periodic exacerbations, much in the same way as we should treat dysmenorrhœal patients during the actual periods attended by pain and difficulty. Warm hip-baths, not exceeding blood-heat; warm enemata of the same temperature; the application of a plaster of opium or belladonna over the sacrum; and most especially the avoidance of coïtus during the periodic dates of pregnancy should be directed. As regards the blind periods of utero-gestation, as they may be called, continence is as proper in all cases at these times as it is during the actual flow of the catamenia. It is during the first half of pregnancy, or in those women who have suffered from dysmenorrhœa before impregnation, that moral and physical sedatives should be most strictly enjoined. I may here observe, that in dysmenorrhœal cases the times of conception are probably times of abortion, the impregnated ovum descending at once through the Fallopian tubes, uterus, and vagina, with an apparent return of the catamenial discharge, instead of tarrying for development in the uterus, so that women, under these circumstances, may never be conscious of having conceived, though they really do so. There can be little question but that many supposed cases of sterility are of this kind: owing to increased excitability of the motor apparatus of conception, the generative act never goes beyond impregnated oviposition; abortion follows so closely upon abortion, that neither the conception nor the abortion are perceived. Such cases, admitting, as they do, of almost certain remedy, are very different from cases of actual sterility. I have just said, that in ordinary instances of abortion excited by ovarian irritation, it is during the early months that precautionary measures are of most importance; but in those extraordinary cases in which abortion is caused by the adhesion of the placenta to the os uteri, it is in the latter periodic dates of pregnancy that the greatest danger is incurred. I mentioned to you in the last lecture, that, even when not the exciting cause, ovario-excitor action was still in many cases the determining cause of premature action of the uterus; so that in all cases of threatened abortion it behoves the medical attendant to treat the periodic dates with circumspection.

The questions of *rest* and *exercise* are of considerable importance in cases of expected abortion. Some authorities advise regular exercise; others, absolute repose from all exertion. There can be no doubt that walking exercise, carried to excess, excites all the pelvic organs, both the uterus itself, and those organs which are in reflex relation with it; and there can also be no doubt that exercise, which in the unimpregnated state is simply moderate, comes to be excess in the gravid subject. On the other hand, rest, and the habits of ease and indulgence, living on sofas and pillows, during pregnancy, favours the accumulation of irritability in the muscular system, including the uterus, and in this way increases the chances of abortion.

The precautionary measures connected with rectal irritation are very simple. They consist chiefly in the avoidance or removal of intestinal accumulations by laxatives and mild enemata; the removal of ascarides, when these worms are present; the palliative treatment of hemorrhoids, all operations upon the lower bowel being avoided as much as possible during gestation; and lastly, the avoidance of drastic purgatives. It is, in fact, only necessary to recognise the rectum, not merely as a neighbour to the uterus, but as possessing an excitor surface with excitor nerves, prone to reflect irritation upon the uterus, through the spinal centre and the utero-spinal nerves, and the prevention of abortion as a consequence of rectal irritation becomes easy and well understood. Rectal and vesical irritation, as causes of abortion, have always been recognised; but this recognition is more practical when we see the exact channels—the mechanism, in fact—by which irritation is conveyed from one organ to the other.

The prevention of vaginal irritation in women liable to abortion from habit, or in whom special symptoms lead us to expect this accident, involves as a preliminary the observance of the most rigid continence. In women who have aborted in previous pregnancies, sexual separation ought to be maintained during the whole of pregnancy; and in all irritable subjects, coitus should be avoided during the ovarian periods of the gravid state. In cases where tumours in the vagina complicate pregnancy, it may become necessary to remove them, both to prevent abortion and to facilitate parturition. In all operations affecting the vagina, they should be so timed as to avoid the ovarian periods, and to fall upon what would be the intercatamenial dates, when all irritation and disturbance can be better borne. I have already referred to the use of the plug or tampon sometimes necessary in threatened abortion with hemorrhage, in cases where we still hope to save the ovum; the plug should not be so large as to stimulate the vaginal surface excessively, and it should be fairly introduced into the upper and roomy part of the passage, so as not to irritate the ostium vaginæ; at the same time there should be nothing like hard pressure on the os and cervix uteri. Whenever the presence of the tampon, carefully applied, permanently increases the periodic pains felt in threatened abortion, it should at once be withdrawn, unless we have resolved to abandon the ovum to its fate. The plug ought never to be left in the vagina more than twelve hours at a time, otherwise it becomes extremely fetid and disagreeable, and probably injurious; it is better even to take it away and renew it oftener than this, and to dip it in a weak solution of the chloride of lime before its introduction.

In threatened abortion from uterine disturbance, we may have to deal with morbid affections of the uterus, with disease of the placenta and membranes, or with disease of the uterus itself.

Any persistent irritation of the uterus, but particularly of the os and cervix, as the most excitor parts of the organ, may cause abortion; this is as natural as that irritation of the lungs should produce cough, or that irritation of the stomach should cause vomiting. In these cases we may have to deal with malignant disease of the uterus, syphilitic or gonorrhœal affections; or simple uterine disease, as inflamma-

tion, excoriation, or ulceration. In malignant disease complicated with pregnancy, our treatment can be little else than palliative; in syphilitic disorders, we must cautiously pursue the same treatment as would be proper in the ungravid state; and in inflammatory diseases of the os and cervix, and their sequelæ, we must not shrink because of the existence of pregnancy from the careful use of the local applications necessary to effect a cure. Unless the uterine disorder is removed, there must be considerable danger of abortion. The original observations of MM. Boys de Loury and Costilhes, and the researches of Dr. Henry Bennet and Mr. Whitehead, in this country, show clearly that inflammation and ulceration of the os and cervix uteri, with mucous or purulent leucorrhœa, frequently coexist with pregnancy; that they are a common cause of abortion; and that they may be treated successfully during gestation, without necessarily disturbing this process. Whenever there is pelvic pain and leucorrhœal discharge in gravid patients who have aborted in previous pregnancies, the condition of the os and cervix uteri should be positively ascertained. The treatment found most successful in cases of inflammation, excoriation, or ulceration, of the lower segment of the uterus is sufficiently simple, namely, local abstraction of blood, and occasional cauterization of the diseased sites; every possible care being taken to prevent local and constitutional disturbance following from the treatment.

Retroversion of the uterus, though sometimes a cause of abortion, generally requires treatment and reposition, for more immediate symptoms than the premature contraction of the uterus upon its contents. In plethora of the pelvic circulation, and in congestion of the uterine vessels not amounting to inflammation, local depletion by leeches, either above the pubes, or applied to the os uteri directly, is advisable. I have often seen great comfort and relief from the sense of uterine heat and distension, produced by constantly wearing a pad, wetted with spirit lotion, over the pudendum.

In the prevention of abortion, morbid conditions of the placenta require to be considered. The placenta is to the fœtus what the branchia are to the fish, the blood of the mother being the fluid medium in which the fœtus respires oxygen during intra-uterine life, a point which has been ably insisted upon by Professor Simpson. For this reason it appears to be, that the blood of the mother during pregnancy is more highly oxygenated than at other times, approaching to the state of inflammation, as may be seen by the buffy coat and the greater coagulability present in the blood drawn from pregnant women. The placenta has a tendency to become unfit for fœtal respiration towards the end of utero-gestation, when Nature is preparing for the change from branchial to pulmonary breathing. There is frequently observed on the surface of the mature placenta crystals of carbonate of lime, which must tend to interfere with its functions as a respiratory apparatus, and generally, I believe, to facilitate its separation from the uterus. This caducous preparation of the placenta, by the deposition of the salt of lime, is probably connected with the demand for ossific matter in the fœtus, but it must also remind you of the similar deposit of silica in the stems of ripe fruit, in order to

facilitate its separation from the parent tree; or we may compare it to the deposit of earthy salts in the lungs and other organs in old age, as preparatory to the death of the individual. It is pretty certain that in some cases of abortion in the latter months, caused by the death of the fœtus, the death has depended on the low respiring power of the placenta, the placental development having progressed so rapidly as to render the organ prematurely deciduous. Under these circumstances the child dies asphyxiated, unless born into the atmospheric air, just as the tadpole perishes when its branchial development has concluded, unless it can be removed from water to the air. In the opposite cases to this, we have sometimes to deal with retention and adhesion of the placenta, because it is not ripe for its separation at the time of labour. Other morbid conditions of the placenta may tend to the death of the fœtus, and indirectly to abortion, such as inflammation and induration of the organ, tubercular deposit, or effusion of blood into its structure—placental apoplexy, as it might be called; but such morbid states are obscure in their diagnosis, and very much removed from definite treatment. . . . . .

In disease of the fœtus, producing death, and abortion several times in succession, I fear little can be done beyond attending to the health of *both* parents. Some have recommended active treatment directed to the fœtus, founded upon the former post-mortem examinations of the fœtus; but a diagnosis in which, as at present, our knowledge of the state of the fœtus actually *in utero* depends on the examination of a previous fœtus, can hardly be depended on as a basis of treatment, notwithstanding the acknowledged tendency to repetition observed in intra-uterine disease. When the death of the fœtus has taken place, the natural result is an abortion forthwith. The respiratory changes going on in the placenta cease, and, as a consequence, the utero-placental circulation is very much diminished, or it is arrested altogether. The temperature of the fœtus falls, and the state of the fœtus and placenta excites premature contraction of the uterus, as mechanically as the rupture of the membranes or the insertion of a tent in the os uteri. In some comparatively rare cases the circulation still goes on in the uterine portion of the placenta, and the fœtus is retained to the full term. Or in cases of twins, there may be an abortion of a dead fœtus, and the retention of a living one to the full term of gestation. In all these cases, whether the irritation be in the uterine tissue itself, or conveyed to the uterus by a diseased or dead ovum, the mode in which the uterus is excited is reflex and spinal, and abortion can only be prevented by diminishing or removing the utero-spinal excitement.

The prevention of abortion depending on habit, and occurring at a particular date of pregnancy, chiefly consists in taking all care to avoid the sources of uterine excitation until the time of danger has been passed. Dr. Griffin, of Limerick, treating the abortive habit as a periodicity, has proposed to administer large doses of quinine; and the suggestion may be useful in some cases. I strongly suspect that one frequent cause of periodic abortion arises out of immaturity of the uterus itself. In practice, we meet with many cases where, although menstruation has appeared, and marriage has been consummated, the

uterus is very small indeed—not much, if at all, larger than is natural in the young girl. Such subjects are open to many inconveniences. In cases of this kind, if conception takes place, the uterus is unfit for the full development of the gravid state; and when it has reached the largest size of which it is capable, abortion inevitably takes place. Sometimes we find, in these cases, that the capacity of the uterus for gestation will increase with every pregnancy, or with increasing years, until, after many abortions, the uterus becomes developed, and the full period is reached in safety. Other forms of abortion, sometimes set down to habit, may depend on those diseases of the uterus which are most troublesome at particular epochs of pregnancy—such, for instance, as retroversion, or ulceration of the os uteri.

In cases of emotional abortion, we can do little in the way of prevention. The indication is of course to keep the mind, and particularly the uterine system, as tranquil as possible after all emotional shocks occurring during pregnancy. As it is generally some few days after the mental shock that the uterine disturbance begins, we have the time in which to do this afforded us; but the effects of emotion of a severe kind can never be altogether averted. Where there is already a tendency to abortion from other causes, emotional disturbances should be especially avoided. We may have the symptoms of abortion passing away, when some sudden ill news, an apprehension of fire, or any other acute disturbance, will produce an instant contraction of the uterus, and the expulsion of its contents. Abortion appears to be prevalent at particular times; but this epidemic is generally, I suspect, rather one of emotion than the result of physical agencies. During the present time, when public catastrophes and apprehensions of evil are rife, and the throne and the cottage are alike agitated, I believe there is an unusual tendency to abortion. I am certain that I have seen several recent cases referable to this cause.

To eradicate the abortive diathesis, prolonged continence ought to be observed. A year's entire rest to the sexual system is not too much in severe cases; and the catamenial periods should be carefully attended to. Dysmenorrhœa should be relieved, if there happens, as there frequently will happen, to be a tendency to this disease. Any disease of the utero-vaginal passage should receive appropriate treatment. Everything which can possibly be devised should be resorted to, to give tone to the uterine nervi-motor system—such as the administration of iron in delicate subjects, the cold douche to the loins, and general cold bathing. In very obstinate cases I should be disposed to try the effects of a continued galvanic current through the spine and the sexual organs; or I would prescribe small and continued doses of ergotine or strychnine as tonics of the utero-spinal axis. The general sedatives of the nervous system during pregnancy are moderate exercise, spare and cool diet, small bleedings in plethoric or in sanguine habits, mental quiet, tepid or cold hip-baths, and, above all, a pure atmosphere. The nervous system in pregnant women resembles in its irritability the nervous system in infants and young children; ordinary narcotics are therefore stimulant rather than sedative, and as such ought not to be prescribed in ordinary cases during utero-gestation.

Art. 74.—*On Occlusion of the Os Uteri and Vagina.* By Dr. Trask.

(*Amer. Journ. of the Med. Sciences*, July 1848.)

The present communication arose out of considerations connected with one lately published (see next Art.) by the same author. Among the causes of rupture of the womb, obliteration of these parts appears as an occasional occurrence, and was thought worthy of more detailed examination. The author, in the first place, narrates twenty-one cases of complete occlusion of the os, upon which he bases an inquiry into the causes, pathology, natural termination, and different modes of interference, with their results.

In two instances the lesion was traced to inflammation following severe instrumental labour; in another to the same cause arising from ordinary labour; and in another to inflammation after abortion. In others it was the result of attempts to procure abortion, or to congenital malformation. As to the condition of the parts: In one case no os could be felt, but in its place a firm point, with three diverging ridges. In others, no locality for the os was perceptible. In others, cicatrices pointed out where the os had been situated. In some instances the os was obliterated by a tough membrane united to its margin, which was broken through by the finger, or by the aid of the female catheter. Naegele attributes the production of this membrane to chronic inflammation of the cervix, which explanation is also admitted by Dr. Ashwell. (Guy's Hosp. Reports, vol. iv.) The strength of this adventitious membrane varies.

The *diagnosis* of obliteration of the os is sometimes a matter of difficulty. Some authors deny its existence, and attribute such cases to obliquity of the organ.

On failure to reach the os, the probability of some form of obliquity would naturally suggest itself. Bearing in mind the different positions which the uterus might assume, the practitioner should explore the whole pelvic cavity; if by chance the os might be found abnormally situate, under the influence of uterine contraction, the head is forced into the hollow of the pelvis, forming a hard globular tumour. If there have been any considerable disorganization, the place where the os should be is recognised by an indurated cicatrix; or if there be simple agglutination of the os, there will be a dimple or depression below the surface of the surrounding parts, indicating the situation of the uterine orifice.

[On the subject of the proper time for interference, and the most suitable means to be adopted, the author proceeds as follows:]

Satisfied that obliteration of the os exists, our course will be determined very much by the character and degree of the morbid alterations. In cases of obstruction arising from the deposit of a thin, filamentous, cellular tissue, Naegele recommends that it should be broken down by a female catheter. In some cases the membrane is so firm as to require division with a cutting instrument.

When the obliteration is caused by firmly organized adventitious deposit, there can be no doubt that an incision should be made at the seat of the obliterated orifice. The only question is as to the time at

which the operation is to be performed. The cases cited show distinctly that nothing is to be gained by delay, but that much is perilled by temporising treatment; and that the chances both to mother and child are much enhanced by an early resort to the incision. The operation is usually performed with a bistoury, guided by the finger.

[The next portion of the paper is occupied with the narration of seventeen cases of partial occlusion of the os uteri, the causes of which are stated to be, as in the former case, inflammation from mechanical injuries, and also organic disease. Ordinary rigidity of the os is not considered by the author, as ample directions for its treatment are to be found in the general text-books of midwifery. His object is to consider the treatment of such cases as do not yield to venesection, tartar emetic, or opium, and whether the rigidity be due to an indisposition in the structures to dilate, or to morbid changes, the result of inflammation or organic disease. With this object three courses are passed in review, namely, abandonment to Nature, artificial dilatation, and incision. The two former are looked upon as useless or prejudicial. Of the latter he observes:]

Our only resource is a section of the rigid os: to determine the proper time for interference is more difficult than when complete obliteration exists. In the latter case, the knowledge that an opening must be made by Nature or art, will induce us to resort to it early, and thus to avoid the risks attendant upon delay; but in obstinate rigidity, unaccompanied by distinct organic lesion, it may be more difficult to determine the proper time for action.

From the evidence of cases, it is seen that the operation, when resorted to in season, is attended by the most favorable results. The incision, so far from leading to more extensive and dangerous lacerations under the continuance of pains, in none of these instances encroached on the peritoneal cavity; nor was there any considerable pain or loss of blood.

[The same principles of treatment, viz. early resort to division of the opposing structures, is also recommended in partial obliteration of the vagina from cicatrices. Dr. Ingleby advises that the incision should be made during a pain.]

Art. 75.—*On Rupture of the Uterus.* By Dr. Trask.

(*Amer. Journ. of the Med. Sciences.*)

This important monograph commences with quotations, exhibiting the great diversity of opinion which obtains among writers of celebrity respecting the course to be pursued under the appalling accident of rupture of the womb. From these it appears that Blundell and Davis would not attempt delivery as long as there appeared to be any chance of recovery undelivered. Lee and Merriman would abandon the woman unconditionally when the rent has become diminished by contraction. Burns and Ramsbotham would be disposed, under these circumstances, to practise gastrotomy early, and by the "small incision." Blundell would wait until there should be no chance of recovery if left alone. Velpeau would try every other mode before proceeding to gastrotomy; and Churchill considers its propriety very

questionable. Dewees, on the contrary, regards gastrotomy, immediately performed, as the only chance. It is, the author observes, of great importance that these discordant opinions should be reconciled, and the practice most calculated to be successful should be determined. And as this can only be done by ascertaining the collective experience of the profession, he endeavours to accomplish the end by the comparison of all the authentic cases on record. Of these, upwards of 300 are collected, and tabulated under various divisions, and with unusual attention to accuracy.

From the analysis of these cases, the author proceeds to establish the history of rupture of the uterus, commencing first with the

Causes of rupture.—These are predisposing and immediate.

1. Among the former, contraction of the pelvis is generally considered to be pre-eminent, especially when the rupture is at the cervix, and its influence is accounted for in three different manners. The first is, that the rupture is due to gangrene, the consequence of inflammation. A second idea is that entertained by Ramsbotham, that a thinning or softening of the uterine tissue may be induced by the pressure exercised between the promontory of the sacrum or pubes and the cranial bones. A third does not recognise any morbid condition of the uterine substance, but accounts for the influence of contracted pelvis by the fact that a portion of the cervix is pinched between the head and the pelvis, and so fixed as to receive the whole force of the uterine contractions.

The author considers that each of these explanations may be occasionally correct, but that neither is of general application.

2. Rupture of the fundus is, according to the author's cases, in a large proportion of instances, caused by a morbid thinning or softening of the uterine walls. Of 49 cases in which the condition of the uterus is mentioned, it was *thinned* in 14, *softened* in 14, both *thinned* and *softened* in 1. In 2 others it was *thick* in some places, *thin* in others. In 10 it is spoken of as *healthy*. These remarks bear out the conclusion of Dr. Murphy (Dub. Med. Jour. vol. vii.), "that in most cases rupture depends upon a diseased condition of the uterus, and is therefore unavoidable" under certain conditions.

3. Other predisposing causes are, a *large fœtal head*, *oblique positions of the head*, and *transverse position of the trunk;* of each of which, examples occur in the table.

4. *Insuperable rigidity of the cervix* acts similarly to a contracted pelvis, as do also unyielding vaginal bands and cicatrices.

5. *Obliquity of the womb*, as a predisposing cause, is illustrated in two cases.

6. The previous performance of the Cæsarean operation renders the uterus liable to give way at the locality of the cicatrix.

7. Dr. Channing furnishes two cases in which *polypus of the uterus* was the remote cause.

The immediate causes of rupture are, uterine action, natural or increased by ergot, external violence, as blows upon the abdomen, and forcible attempts to induce artificial delivery.

1. Rupture from spontaneous action of the uterine fibres is analogous to rupture of the heart and stomach. It is not, as is commonly

thought, always connected with protracted labour, but may, as the author shows, occur at any time after the commencement of uterine contractions.

2. If normal uterine action is capable of inducing rupture, the increased action of the organ under the use of ergot is *à fortiori* to be expected to increase the danger of the accident. The author remarks that, for obvious reasons, but few such instances are recorded, but quotes the authority of Dr. Meigs, who has seen at least three cases in which rupture followed the imprudent exhibition of ergot. Dr. Bedford also possesses four specimens of ruptured uterus from the same cause.

3. Rupture may be produced by blows, and also from injuries inflicted during the unskilful performance of obstetrical operations, especially that of introducing the hand in turning. The cervix has been also torn off by the forceps, and that instrument has been in other cases thrust though the uterine parietes. The author adduces several cases, illustrative of the accident of rupture arising from inexpert obstetrical interference.

4. La Motte and Levret attach great importance to violent movements of the fœtus as a cause of rupture. In four cases in the author's table, the accident followed immediately upon such movement, but he is indisposed to admit the sequence of cause and effect.

5. From three of the cases, it appears that rupture may follow mental emotion.

Pathology of rupture.—The author's abstract of cases embraces the most important circumstances connected with the pathology of this accident. Of these we have space only for the following table:

Situation of the rupture. — Of cases occurring during utero-gestation—

7 were of the fundus.	3 involved the cervix and vagina.
1 was of the posterior part.	1 from cervix to fundus.
2 of the anterior part.	1 of cervix, body, and of the bladder.
2 of the right side.	2 of posterior and inferior part.
1 of the left side.	1 lower segment torn off.

Of cases during parturition—

11 were of the fundus.	15 from cervix to fundus.
13 of the posterior part.	2 involved the bladder.
14 of the anterior part.	47 at the cervix, involving the vagina.
8 of the right side.	2 of the body.
7 of the left side.	7 transverse.
2 of the vagina.	

Symptoms of rupture.—The symptoms of rupture of the uterus are usually well marked, and the common observer cannot but see that something serious has happened. When it occurs during parturition, it is generally during a pain of unusual severity. The patient is conscious that something has given way within her; she feels a tearing or rending sensation, and in some instances the sound attending the rupture has been heard by the bystanders. But, whether the patient be conscious of any peculiar sensation or not, almost immediately after the stomach rejects its contents, the countenance assumes an expression of anxiety, and on examination, the presenting part is found to have receded; the contents of the uterus are high up in the abdomen

perhaps the limbs of the fœtus can be distinguished immediately beneath the integuments, and there is slight hemorrhage from the vagina.

Very soon dark-coloured matter is ejected from the stomach, the pulse becomes rapid and feeble, the skin cool, and covered with perspiration, and there is great sensitiveness of the abdomen. If no relief be afforded, the patient dies within a few hours of hemorrhage, or from the shock which the constitution has received, or lingers a few days to perish from inflammation; or perhaps, in some rare cases, life is continued, and the fœtus is discharged piecemeal. To the occurrence of each and all of these symptoms there are numerous exceptions, and the practitioner should therefore be prepared to meet with cases of this accident in which they are not so distinctly marked.

Diagnosis.—The two circumstances which are diagnostic of the accident are, first, recession of the presenting part, which almost always happens when the rupture is at the fundus, or in the body; very often when it is at the cervix, and sometimes when it is confined to the vagina; and, secondly, the ability to distinguish the limbs of the fœtus beneath the parietes of the abdomen, where they were not felt before. It is important, however, to remember that, if the head is impacted it cannot retreat, and also that, in some persons, the walls both of the abdomen and uterus are so thin, that the limbs of the fœtus can be clearly made out by external examination, even when no rupture has taken place.

Prognosis.—The author considers that we are unable to ascertain the actual rate of mortality. According to Smellie and Lever, slight lacerations of the os are unattended with danger; while, on the other hand, several such in the series of cases accumulated by the author have proved fatal.

In forming our prognosis, much consideration is to be given to the extent of injury, the parts involved, the amount of hemorrhage, and the constitutional shock. If the peritoneum remain entire, it is evident that the patient escapes in a great measure the risk of peritonitis. When the muscular coat is involved, the patient is exposed to the risk of metritis. The author's cases do not teach us that lacerations of the cervix itself, extending into the body of the womb, or down into the vagina, enjoy any immunity over rupture in any other part of the organ.

The prognosis in any particular case must be a matter of great uncertainty, inasmuch as some have recovered from most extensive lacerations, and others have died from very slight lesion of the muscular coat alone. The amount of danger that may be incurred from inflammation can never be anticipated.

Since a morbid condition of the womb is in many cases a predisposing cause of rupture, it becomes an interesting question whether this condition can be predicated during life. It does not appear that this can be done. It is true that in some of the cases collected by the author, the patient had been the subject of dysmenorrhœa; another had repeatedly miscarried; others complained of severe pain in the belly; others of a tendency to vomit, &c.; but the information to be

derived from such symptoms is obviously too vague to be relied upon as indicative either of *softening* or *thinning* of the uterus.

Treatment.—The author first inquires whether the practice of non-interference, recommended by the older writers, is correct, and decides satisfactorily, from his series of cases, that it is not. On the contrary, it is rendered evident that artificial delivery, as sanctioned by modern authority, is the proper course. Thus, of 154 cases delivered by artificial means, 97 died, and 57 survived; of 89 abandoned undelivered, 65 died, and 24 survived. Of 31 delivered by natural efforts, 20 died and 11 survived.

This gives a slight difference in favour of those artificially delivered, but is to be regarded as a mere approximation to the truth, for reasons afterwards stated.

But even if artificial delivery be not greatly superior to non-interference as regards ultimate recovery, it has considerably the advantage as regards immediate survival, for it appears from the author's tables that the average continuance of life after rupture is, for the delivered, 22 hours; while for the undelivered, it is only 9 hours.

The author considers the treatment of rupture during pregnancy and parturition together, noticing, first, cases in which the whole fœtus, or the head, with more or less of the body, has escaped into the abdomen; he also treats of the same division of cases under the complication of contracted pelvis, after which he lays down the following rules of guidance:

1. *When rupture occurs in a patient with a well-formed pelvis*, the head being of a natural size, the treatment must depend upon the situation of the fœtus. Should it have descended into the pelvic cavity, and be ascertained to be alive, delivery by the forceps should be attempted. If the child be known to be dead, the head may be lessened.

2 *Should the fœtus have escaped into the abdomen, the pelvis being ample*, the course to be adopted will depend upon the condition of the laceration. If the laceration has engaged the vagina alone, or if, although the cervix is implicated, there is still room to extract the fœtus without forcible dilatation, version is to be preferred. Where the rent is confined to the uterus, and the edges have contracted, a different course is indicated. The only conditions in which version is allowable after rupture are, *ample pelvis, head of moderate dimensions, and the uterus uncontracted, or the rent confined to the vagina.*

3. *If the head be impacted from constriction of the outlet*, perforation appears the proper mode of practice.

4. In the case of escape of the fœtus, with contraction of the edges of the laceration, two courses have been proposed; one is, to leave the patient to Nature, the other is gastrotomy. The author has shown that non-interference holds out a worse chance than any other, both as regards the immediate and remote consequences; and he therefore fixes upon gastrotomy as the only justifiable proceeding.

5. When the brim of the pelvis is contracted by deformity or morbid growths, the author likewise advises gastrotomy in preference to violent attempts to deliver by the forceps, &c.

6. A question often arises as to how long a time after rupture it is proper to attempt artificial delivery. The longest period in the table was eight days. Although this case recovered, the author does not regard it as a course to be generally recommended. When patients have recovered with the fœtus in the abdomen, it has been either from the escape of the fragments after putrefaction, or after the formation of false membranes about it. Should the formation of false membranes have taken place by the organization of the lymph thrown out, a destruction of these membranes, by the violent removal of the fœtus, might easily result in serious consequences; but if, on the other hand, putrefaction had taken place, and the patient laboured under fever in consequence, a careful attempt at removal by the hand, provided the rent freely admitted it, or by gastrotomy, would probably afford the best chance.

7. *Delivery should be effected as early as possible after the rupture has occurred.*

8. When the death of the mother has taken place, and the child is known to be alive, it should be extracted by gastrotomy.

Treatment after delivery.—It appears from the histories of the cases collected by the author, that the course from which the greatest success is to be expected is the following:—Immediately after delivery, an opiate should be given, and stimulus if required. The bowels should be evacuated before inflammation sets in. The patient should be put upon an active mercurial course; as soon as the bowels have been moved opiates should be administered so as to restrain their action for some days. Inflammation is to be kept within bounds by the abundant use of leeches, and evacuation of the bladder must be secured by the catheter.

Art. 76.—*On the Mode of Application of the Long Forceps.* By Professor Simpson.

(*Edinburgh Monthly Journal*, Sept. 1848.)

When the head of the child becomes fixed in the brim of the pelvis, and the uterus fails in propelling it, one of two modes of instrumental delivery are usually resorted to, viz. perforation and craniotomy, or extraction by the long forceps.

Craniotomy is the preferable operation when the child is dead, and where the distortion is very great; but it has the disadvantage of being fatal to the child in all cases, and to the mother in one in five cases, as appears from Churchill's tables. The long forceps are stated by the author to afford the best chance of life to the child, but are not so often used as they should be, from misapprehensions regarding the difficulty and danger of their application. They differ from the short forceps both in construction and application. The short forceps are always applied to the lateral surfaces of the head, whatever its position may be; the mode in which the long forceps ought to be applied is the subject of considerable difference of opinion.

If they are applied for inertia, hemorrhage, or other such complication, while the head is passing through the brim, and the brim and head preserve natural proportions, the instrument may perhaps be

applied, like the short forceps, to the sides of the head; but the common reason for the application of the long forceps is morbid contraction of the brim in its most general form, and from its most general cause, viz. in the antero-posterior diameter, from projection forward of the promontory of the sacrum. How are the long forceps to be used in this case? It is in the first place requisite to state, that under this complication the child's head is situated in the brim, with its long diameter lying in the transverse diameter of the brim, or with the forehead looking to the ilium, and the occiput to the other. In other words, the long diameter of the head is not as usual placed in the right diagonal diameter of the brim, but more in its transverse; for where the promontory of the sacrum forms a morbid projection, the transverse forms the longest diameter of the brim, and, consequently, the one in which the child's head comes to be placed by the uterine efforts. The face or forehead looking to the ilium, and the occiput to the other ilium, the lateral surfaces of the child's head come to be compressed between the protruding sacral promontory and the interior of the symphysis pubis. Now, in seizing the head in this case, some authors aver that,

1st. *The blades of the long forceps are placed, as in applying the short forceps, on the lateral or aural surfaces of the child's head*, and consequently with one blade in front of the sacral promontory, and the other behind the symphysis pubis. Burns, Dewees, &c. speak thus of applying the long forceps in the conjugate diameter of the brim; and Dr. Churchill has published a woodcut representing this as the actual method of their application in practice. But its application in this position is impossible in the very cases in which the long forceps are generally required, viz. where the conjugate diameter is contracted, for there is not room for the additional thickness of the blades of the instrument; if applied, they add to the thickness of the head in that one diameter and place in which it is already too thick and large; their pressure would greatly endanger the urethra and bladder in front, and the soft structures placed over the promontory of the sacrum behind; and they could not thus be placed in the axis of the brim in consequence of the pressure of the perineum upon the instrument below. Other authors aver that

2d. *The blades of the long forceps should be placed over the occiput and forehead or face of the child, and consequently in the transverse diameter of the brim.* This is the view of their mode of application taken by Deleurye, Davis, &c. &c., and approaches much nearer the reality than the former opinion; but that it is not strictly true, is shown by the marking of the place of application of the blades of the instrument after the child is born, and by a more attentive consideration of the mechanism of such labours. One blade is found to have been placed behind one ear, and the point of the other to have pressed upon the side of the forehead, temple, or region of the eye; but these would not be the places of the markings of the blades if they were applied in the transverse diameter, upon a head placed directly transverse. Dr. Ramsbotham has published a beautiful plate of the mode of application of the long forceps, and has given an excellent chapter on the subject in his work on midwifery. He correctly represents in

the plate the anterior blade as placed upon the side of the forehead and eyebrow; but in order to give this view with the forceps placed in the transverse diameter of the brim, he has been obliged to represent the face as turned backwards; whilst in reality, in morbid contractions of the conjugate diameter of the brim, it is actually turned laterally; and he places the long diameter of the blades of the forceps so as to traverse the right oblique instead of the left oblique pelvic diameter.

3d. *The blades of the long forceps should, I believe, be placed obliquely upon the child's head—one, the posterior, over the side of the occiput, and the other, or anterior, over the side of the brow or temple, and consequently should be situated in the oblique diameter of the brim.* The markings on the child's head after birth always show this mode of application of the instrument: when properly applied upon the mother, and when their situation relative to the pelvis is examined, they are found to have assumed this position; and in experiments with the instrument (when the head of a dead child is fixed in a pelvis with a contracted brim), this is the position and relation which the instrument will be seen to assume with relation to the infantile head and maternal pelvis. Besides, in thus placing the instrument, while we incur less danger of injuring the urethra and other important parts, we place the blades of the instrument in exactly those parts of the pelvic circle where there is least pressure, and consequently most room for them. It is apparently in consequence of misconception on this point that some authors have come to prefer the use of the perforator to that of the long forceps. Dr. Collins, for example, argues that, when the head is detained in the pelvic brim, the brim "measuring little more than three inches from pubis to sacrum," there cannot possibly be space for the long forceps, even were the bones denuded, seeing that the blades of the smallest-sized forceps used in Britain, even when completely closed, measure from $3\frac{1}{8}$ inches to $3\frac{1}{2}$. "How," he adds, "is it possible with the forceps to drag a child through a pelvis where there is not space, except by force, to introduce, as is commonly said, a straw, or where the smallest flexible catheter cannot be passed in some instances into the bladder?" These and such opinions proceed on the erroneous idea that the long forceps are to be applied, within the pelvis, at the parts or in the diameter in which the pelvis is *most* contracted, and they suppose that the head, when fixed in the pelvic brim, fills completely the *whole* circle of the brim. The usual shape of the morbidly-contracted pelvic brim is cordate, or rather elliptico-cordate, but the child's head is not of this shape; it is ovoid, and consequently when applied to the cordate brim leaves unoccupied spaces. The most unoccupied spaces before and behind are at the extremities of the oblique diameters of the brim, where sufficient room is left for the passage of the blades of the forceps, and in these points they are passed when properly applied.

Art. 77.—*Remarks on the Forceps.* By Dr. Alexander Tyler.

(*Obstetric Record*, August 1, 1848.)

We have all, no doubt, often asked ourselves the question, why an instrument so valuable, in the hands of judicious and experienced practitioners, should be extolled by some as the noblest of instruments, whilst others have attempted to limit its use so far as almost to discard it from general practice; and some few even have looked upon the introduction of the forceps into obstetric practice as a greater evil than those for the prevention of which such an instrument was invented.

Now to be able to arrive at anything like a true estimate of the real worth of this instrument, it will be necessary for us to trace the sources of error into which both the advocates and enemies of the forceps have fallen, and to discover, if possible, the cause of all this discrepancy of opinion as to its real value. That their abuse, in the hands of rash and inexperienced practitioners, has tended principally to lower our estimate of them, I believe to be an admitted fact; we shall therefore, first, endeavour to point out some of the sources of their abuse, and what we conceive would be the best means of prevention in future.

The abuse of the forceps, in the first instance, often arose from an exaggerated opinion formed of their real capabilities. We read that Dr. Hugh Chamberlen, in 1670, asserted he could deliver a woman in a few minutes with the forceps, in whose case Mauriceau had given it as his opinion that the Cæsarean operation would be required; Chamberlen's attempting to deliver with the forceps, in a case of such extreme deformity, showed that the range of their applicability, in his mind, was much too extended. Nor was it up to a much later period that any general rules, as to the cases suited for their safe and successful application, were framed; and even at the present day, with all the knowledge we possess of the grades and varieties of deformed pelves, few obstetricians will deny the great difficulty that is occasionally experienced in deciding as to whether a possibility exists of delivering a living child, or that rather we should abandon all hope of saving the offspring, and sacrifice one life, for the purpose of delivering the mother with greater safety.

Every obstetrician of experience has been placed over and over again in this difficulty, and notwithstanding the extent of his own experience, feels he would like to have the opinion of another more experienced than himself. This can easily be obtained in large cities, and by and by, when railways are generally established throughout the land, will be available also to country practitioners in general; but hitherto the young country practitioner has not enjoyed these advantages; he has been too often placed in the dilemma of either calling in a rival, or acting on his own judgment; the latter is the course generally pursued, as, unfortunately, medical men in some country towns carry this spirit of rivalry so far, that they prefer operating upon their own responsibility, rather than run the risk of having their practice found fault with by another, who may afterwards unfairly criticise, to the injury of their professional reputation. Now to enable the young

practitioner to meet these difficulties at his outset in practice, let us give him opportunities of operating while under our guidance as a pupil. It has often struck me, that the instruction which our students get in practical midwifery, even in Dublin (acknowledged to be one of the best midwifery schools in the world), is in some respects deficient for the mass of midwifery pupils, who, without further preparation or experience, are to engage in the practice of midwifery afterwards. I include in this category all students who are satisfied with a six months' attendance upon practical midwifery. During that period, if industrious, no doubt they may lay up a useful stock of practical information, so far as diagnosing presentations, the unequivocal symptoms of labour, treatment of hemorrhage, and so forth; they will also have seen the various operations performed, instrumental and manual, and may have delivered the stuffed fœtus with the forceps, on the machine—a lesson I by no means disapprove of; on the contrary, I believe that a certain degree of dexterity may be acquired by practising the use of the forceps even on the machine: but is that lesson sufficient to guide the young practitioner in his first attempt at extracting a living child through a pelvis containing most delicate and important soft parts; I need only mention the urinary bladder in front, and the rectum behind, together with the numerous important nerves and blood-vessels, &c.

The operation upon the machine can be accomplished by due attention to the laws of mechanics, a body of a given size being handed to him to extract through a space of known dimensions; but how altered are the circumstances of the case, when he is called upon to deliver a delicate woman of a living child! here two lives are depending upon his skill and judgment. He may, no doubt, succeed in extracting the child, from the knowledge that he has acquired of the axes of the pelvis, and the previous accomplishment of delivery of the stuffed fœtus with the forceps upon the machine; but he must now take into consideration, first, that the compression exerted upon the child's head, if too long, &c., will destroy its life; and second, that the soft structures of the mother are endangered by every mal-directed movement of the instrument, especially should they have been at all in an unfavorable state for delivery, the former foiling the very object for which we have recourse to the forceps; and the second error, if committed (of injuring the soft parts of the mother), entailing too surely a life of suffering and misery upon the unfortunate victim, should she recover the first effects of the operation.

With a view of checking, and, in time, curing this crying evil, it has often struck me for some time back, as no doubt also others, who have considered the subject in its proper light, that our only effectual remedy for it would be, to afford advanced students (who purpose devoting themselves to midwifery practice) opportunities of using the forceps, and indeed performing the various other obstetric operations (under our strict guidance and inspection) which they will afterwards often be called upon to perform out of the reach of assistance, whilst in the discharge of their daily duty. I feel convinced, were such opportunities generally offered, that numbers would be found ready to avail themselves of the increased facilities thus afforded, of safely ac-

quiring dexterity and confidence in the use of instruments, now denied to the majority, whilst resident in our midwifery institutions, and which they must afterwards acquire, to the detriment of science and of their patients, and perhaps at the expense of losing a hard-earned reputation. Surely, in this age of advancement, when education is making such strides to instruct the millions, we ought not to deny the midwifery pupil the means of perfecting himself in that particular branch, unless at such a sacrifice of time as is incompatible with his general interests, if purposing to settle in the country, or abroad.

The abuse of the forceps in the hands of unskilled and inexperienced practitioners, in my mind, ought to rank first amongst the causes tending to depreciate their real value, or even, I would venture to say, their abandonment, by a few over-cautious practitioners. The second cause may fairly be assumed to be the great variation as to the length and size of the instruments recommended and used in different countries: for instance, let us contrast the modern French forceps with those in general use in this country; the former measure eighteen inches in length, whereas ours seldom exceed thirteen, and the other proportions are equally at variance. Now can it be imagined that both are equally applicable and safe? surely not; either those used by the French are too long and bulky, or else our forceps are inefficient, and therefore worse than useless.

I believe most experienced midwifery practitioners, at lest in this country, have come to the unanimous decision, that as a general rule, the long forceps (by which term I would designate all forceps exceeding thirteen inches in length) are most unsafe as regards the soft structures of the mother, and in most instances where used, have proved equally dangerous in compromising the life of the child, so that in the majority of cases we might as well have performed craniotomy, with a certainty of preserving in perfect integrity the soft structures of the mother, as well as lessening the risk of a fatal termination; inasmuch as we substitute an operation of safety and of easy performance for one which must be looked upon, in all such cases, as highly dangerous in its results, even when performed by the most expert and judicious operator. Taking this view of the subject, I think it ought to be laid down as a law amongst obstetric practitioners, not to have recourse to the use of forceps exceeding thirteen inches in length; but rather to use the deadly perforator, for the sake of the mother, without reference to the life of the child, in those cases requiring a longer instrument. Until some definite decision has been come to in reference to the limited length of the forceps, it never can be considered as a safe instrument; for inasmuch as every additional inch adds to its leverage power, by so much is the danger increased of using it. In many cases of slight deformity at the brim, where the head is arrested, and where the advocates of the long forceps would recommend their introduction, I should much prefer the operation of turning, as recommended by Dr. Simpson, as affording nearly as good a chance of saving the child, without putting the mother to such risks as I maintain she always incurs by the introduction and use of forceps with such great leverage power, and the iron points of which are far out of our reach and guidance. Or if we can be certain that the contracted brim is wide

enough to allow the passage of the child's head, when compressed under the influence of powerful uterine action, I think, in such a case, we are justified in administering the ergot of rye, the action of which upon the uterus, if the impediment exist only at the brim, will effect delivery safely and securely; and even if the cavity and outlet are also contracted, will at least drive down the head of the child within reach of such forceps as we are in any instance justified in using.

[The author, in conclusion, narrates cases, several of which exhibit the advantoge of giving ergot previous to using the forceps. In one instance the head was quite out of reach until driven down by the expulsive action of this drug, and but for this the author would have had recourse to the perforator.]

ART. 78.—*Spontaneous Expulsion of an Uterine Tumour after Delivery.* By Dr. ELDREDGE,—We have great pleasure in noticing the following remarkable case, in which a large uterine tumour, probably of the ordinary fibrous character, was enucleated and expelled without artificial interference. It is probable that, consequent on delivery, inflammation and sloughing of the uterine tissues between the tumour and the cavity of the uterus had taken place, and that the mass had been expelled by the uterine contractions, to which its own presence in such a state would give rise. It is particularly interesting and instructive, as affording another instance of nature's own process for the cure of this malady.

The mother, æt. 37, had borne her last child seventeen years previously. She had, since then, enjoyed very good health, and her pregnancy presented nothing peculiar, excepting an apparently very rapid and extraordinary increase of her size. The labour presented no remarkable or very serious peculiarity, except its protraction, and that force was required to bring out the head, the breech having presented. The child was dead. After complete delivery, the uterus continued so large as to excite a suspicion of the presence of twins. After about an hour an examination was made, per vaginam, and the uterus found to contain a hard unyielding tumour, of the size of an adult's head, or even larger, its surface presenting the appearance of granulations, without any investing membrane, and internally its structure was fibrous and extremely hard, firmly imbedded in the muscular texture of the uterus, and attached to it over a large surface. At its margin it could be separated from these attachments by the fingers, but soon the finger reached adhesions so firm as to be incapable of dividing them. She was at this time full as large as a woman at the full time. For two weeks she had frequent febrile attacks. At the end of this time the tumour began to diminish slightly, and the discharges became very fetid and offensive; but her general health steadily improved. Thirty-eight days after her confinement the tumour was discharged without any pain. It was very fetid, and had evidently been detached for some time. The tumour weighed two pounds, and measured five inches by three, even after suffering so much from breaking down and decomposition.

Boston Med. and Surg Journal, Feb. 2, 1848, and *Obstetric Record*, July.

Art. 79.—"*Sachets*" *in Prolapsus and Relaxed Vagina.*—Dr. Meigs frequently has recourse to the sachet, or little bag recommended by Leuret, but too much neglected in the present day. These should be made of good linen, of the shape of the finger of a glove, and packed full of finely-ground, but not pulverized, Aleppo galls; to which may be added a few grains of sulphate of quinine and alum. The bag may be secured, and its removal assisted, by tape secured to its lower end. Before being inserted, it should be soaked in some weak port wine or claret, and then pressed dry in a napkin and dipped in sweet oil. It will give tone to the vaginal walls, as well as keeping up the womb. It may be allowed to remain six or eight hours daily for an indeterminate period. These sachets may be made of other ingredients, as cubebs, kino, oak bark, &c.

Females and their Diseases, p. 177.

Art. 80.—*Medicated Pessaries.*—The following are those chiefly used by Dr. Simpson:

Zinc pessaries. ℞ Zinci oxidi, dr. j; ceræ albæ, dr. j; axungiæ, dr. vj. Misce et divide in pessos quator.

Lead pessaries. ℞ Plumbi acet., dr. ss; ceræ albæ, dr. iss; axungiæ, dr. vj. Misce et divide in pessos quator.

Mercurial pessaries. ℞ Unguent. hydrarg. fort., dr. ij; ceræ flavæ, dr. ij; axungiæ, oz. ss. Misce et divide in pessos quator.

Iodide of lead pessaries. ℞ Plumbi iodidi, scr. j; ceræ flavæ, scr. vj; axungia, dr. v. Misce et divide in pessos quator.

Tannin pessaries. ℞ Tanninæ, scr. ij; ceræ albæ, scr. v; axungiæ, dr. vj. Misce et divide in pessos quator.

Belladonna pessaries. ℞ Extr. belladonn., scr. ij; ceræ flavæ, dr. iss; axungiæ, dr. vj. Misce et divide in pessos quator.

Monthly Journal, June 1848.

SECT. II.—DISEASES OF CHILDREN.

Art. 81.—*On the Pneumonia and Bronchitis of Infancy.*

By R. C. Golding, M.D.

(*British Obstetric Record*, No. 11.)

[After explaining the source of the peculiar liability of early life to pulmonary and bronchial affections, the author endeavours to systematize the variable phenomena attending them in the following manner:]

1. The bronchitis of children may be acute, attended with copious purulent secretion, dyspnœa, and inflammatory fever; or, be mere congestion of the lining of the air-tubes, with increase of their natural secretion, without fever or dyspnœa of any importance.

2. The degree of dyspnœa and fever present vary much; they are more intense the greater the vigour of the general constitution; bronchitis in such cases is more liable to pass into lobular pneumonia than is that form of bronchitis, though acute, occurring in strumous habits.

The bronchitis of measles and scarlatina is attended with intense fever and prone to pneumonic complication.

3. Bronchitis is apt to become chronic in strumous children; and where a predisposition to vesicular emphysema exists, frequent bronchitic attacks during childhood is a most fertile source of that lesion.

4. The pneumonia occuring as the sequela to, or as an aggravation of the bronchitis of infants, is usually of the lobular form; the inflamed portions present changes, different in the several portions so circumstanced (solid, from red or grey hepatization; soft, from the formation of pus, or from sphacelus). Sometimes the pneumonia is of the lobar kind, attended with the same morbid changes, and with phenomena, both general and physical, as in the adult: that following scarlatina and smallpox is usually of the lobar kind; in such cases pleurisy is not unfrequent, especially when the inflamed portion is near the surface of the lung.

5. Expectoration is usually profuse and purulent, though swallowed, and sometimes vomited with other substances existing in the stomach at the time of ejectment.

6. The morbid appearances of the lungs and lining of the bronchial tubes have been described most beautifully by West, Rilliet, and Barthez: to the ordinary appearances of congestion and inflammation may be added, deposition of miliary tubercles in children predisposed to such deposition, and œdema of the subpleural areolar tissue, in cases where urgent dyspnœa has preceded dissolution.

7. The respirations are increased in frequency, often 40 or 45 per minute; the expiration is usually prolonged; the râles vary in character and degree of audibility according to the size of the tubes over which the examiner is listening, and to the quantity and consistence of their secretion: the following are the chief points of practical importance connected with the râles:

a. Although commixed, the varieties of the mucous and crepitating râles may with care always be discriminated.

b. Mucous râles indicate free effusion into, and thick consistence of the secretion in the bronchial tubes: consequently, more of a congested than of an inflammatory condition of the parts eliciting them: if inflammation has been previously acute, it may be known to be resolving when such râles are audible.

8. Crepitating râles, large and small, indicate scanty effusion into the bronchial tubes, together with more or less complication of the pulmonary parenchyma: the secretion in these instances is thin. These sounds mark either the commencement of inflammation, or such a congested condition of the parts yielding them, that antiphlogistic measures must be resorted to for their alleviation.

9. Mucous râles have always seemed to me to be most audible during inspiration; whilst crepitating are most so either at the end of inspiration, or during the prolonged expiration usually present under these circumstances: this difference may be mainly due to the greater loudness of the mucous râles during inspiration than during expiration.

10. Nothing more will be said in this place on general or physical phenomena present during the bronchitis and pneumonia of infants, further than to state that a large portion of lung must be condensed

by inflammation to elicit a readily appreciable dullness on percussion; inasmuch as the lungs of infants are so well permeated by air (except where a mechanical obstruction exists to its ingress) that a small portion of condensed lung is with difficulty defined. Blueness of the lips, with general pallor of the surface, indicate a degree of inflammation or extreme congestion, which, if not relieved, must terminate fatally. The prognosis of these affections in children is always uncertain; indeed no rules can be laid down with sufficient accuracy to determine the point. There is so much reparative power in children, that the most formidable symptoms may be present, and yet recovery ensue; on the other hand, the most trivial cases of pulmonary inflammation may prove fatal, not so much *per se* as by a sympathetic effect on the nervous centres, inducing convulsions, coma, and the like. So long as the cutaneous transpiration is kept up, and other organs remain uninfluenced, no apprehension need be entertained. But if the respirations become frequent, the surface pale and dry, the lips livid, and vomiting, coma, or convulsions supervene, the case is nearly hopeless; though even then, the efforts of the constitution, aided by diaphoretics and active purging, may be effectual in warding off the fatal result. Of treatment it is unnecessary to say much here; my only object is to remark on the efficacy of ipecacuanha, which I believe to be as efficacious as tartar emetic is in the allied affections of adults; acting in a similar manner, and may be given with the same tolerance of action as obtains with that heroic remedy. Children under 12 months will bear half a drachm of the wine every two hours; if the case is urgent, the same quantity every hour; above 12 months, one drachm may be given.

The first and second dose may produce vomiting; this, however, is of no moment; as the distressing effect of, and copious diaphoresis, the immediate consequence of that state, will be attended with most beneficial results.

The medicine (as is the case with tartar emetic) is generally borne with impunity, producing no physiological effects, till, by its therapeutic action on the inflammation, that process has subsided: this is a good index of the state of the inflammation, and a manifestation of the efficacy of the remedy for its removal.

Active purging, sinapisms to the thorax, and the warm bath, must be used as adjuncts; when convalescence is established, the heat of the surface must be preserved by flannel being constantly worn next it.

Art. 82.—*Practical Remarks on Croup.* By Dr. Zeroni.

(*Henle and Pfeufer's Zeitsch. and various journals.*)

The most ordinary form of croup is *congestive croup*. This form generally occurs at a time when there is a tendency in the weather to induce catarrhal affections, manifesting itself suddenly, generally in the night, and without any precursory symptoms; with the exception, perhaps, occasionally of a slight cold in the head. In this form of the disease, children wake from a quiet sleep with a sharply barking kind of interrupted cough, raise themselves in bed, and begin to cry in

apparent distress, a piping hissing inspiration being occasionally heard, as well as in their coughing. The countenance is often flushed and turgescent, but the respiration is not hurried, and but little febrile excitement is perceived in the pulse. When the attack subsides, the child again falls asleep, and rests quietly till the morning; occasionally, however, the attack recurs, respiration becomes more noisy, rattling and hissing, and the child either vomits, or simply makes an effort to do so. This form of the disease requires little more than careful nursing for its cure; the child should be kept in bed, be made to drink copiously of warm drinks, partake freely of some oily emulsion, and have a sponge steeped in hot water laid on the neck. If, however, a hissing hurried respiration causes apprehension of a recurrence of the attack, the most effectual means is to give an emetic, continuing its use until the child has vomited several times. (This form of the disease appears to be induced by an hereditary and acquired predisposition.) To young children during the first year, Dr. Zeroni gives $\frac{1}{4}$ gr. cupr. sulph. every quarter of an hour.

The second form is *inflammatory laryngeal croup*. This is far more serious in its nature, and *never* occurs without premonitory symptoms, or where it may not be referred to the action of some injurious influences. It may have been induced by the preoccurrence of the milder form, or owing to exposure to bad weather immediately after recovery from a former attack. The characteristic symptoms of this second form of croup are as follows: Broken, rough, whistling cough; the inspiration is quick, and has a sharp sound; the child is restless, moves the hands, bringing them frequently to the head and neck. The face is hot, red, or purple, the neck swollen, whilst the pulsations of the heart and arteries are rapid. When the attack subsides, the child becomes strikingly animated, enters into his customary sports, and evinces no desire to lie down or to go to sleep. Respiration after the first attack, and even after several attacks, is quiet and natural; it becomes, however, gradually more hurried and noisy, and a faint rattling is heard, which assumes by degrees a metallic sound. Hoarseness increases, and the voice becomes low and whistling. The attacks come on more frequently, and the child is more restless and irritable during the periods of intermission, whilst the pulse grows fainter and fainter. This uneasiness, however, ceases. The child dozes continually, lies on its back, with its head thrown back and pressed into the pillow; the throat protrudes, the countenance is drawn, pale, and swollen, somewhat of a bluish or yellowish tinge. The eyes are sunk, and half shut; whatever is handed to the child is impatiently pushed aside, and nothing can induce it to drink. The respiration is loud and rattling, all the muscles of the neck act convulsively, the pulse is frequent and small. The child dies either in this state of sopor, with the symptoms of paralysis, or in the midst of convulsions induced by another choking attack of cough.

This form of disease requires prompt and energetic treatment. No time should be lost in abstracting blood, and no apparent amelioration of the symptoms should hinder the frequent application of leeches, in proportion to the age, until the child begins to evince an appearance of exhaustion from loss of blood. A second important means is cupr.

sulph.; from three to four grains of which should at first be given in order to induce vomiting, and the dose should then be reduced to one eighth or one fourth of a grain, every half-hour, or hour, until the disease assumes a favorable turn. Dr. Zeroni also speaks of the invaluable aid he has derived in some cases of *this* form of croup, but not in any other, from a combination of musk and opium.

Inflammatory tracheal croup.—This is likewise attended by premonitory symptoms, and induced by pre-existing or extremely injurious influences. It generally occurs in the months of February and March. Children catch cold, have a dry, somewhat rough cough, which being often disregarded, they are frequently suffered to expose themselves to cold and damp; the hoarseness and cough gradually increase, but this state often continues for upwards of a week before the occurrence of the fit of choking, and before medical advice is sought. After the first attack the child is often cheerful, and even at times extremely merry. The voice is quite gone, the respiration somewhat hurried, and more or less rattling; the cough not frequent, short, rough, unattended by a whistling inspiration, no expectoration, or if any, merely a white frothy mucus interspersed with a few streaks of blood; the pulse quick, the skin warm, and the urine natural. If the little patients are able to speak, they complain of pain in the neck and the middle of the chest. By degrees the choking fits become more frequent, the respiration more hurried and difficult, and the tone accompanying it rougher and more croaking. Extreme hilarity and the most remarkable movements alternate with excessive lassitude, during which the child sinks down exhausted, falls asleep, exhibiting the most marked disinclination to be spoken to or touched. The cough becomes a noiseless suppressed expulsion of air, the attacks are accompanied by a violent noisy rattling sound, the muscles of the neck become powerfully convulsed, and the head is thrown far back. The pulse is small and quick, the skin drawn, the muscles extremely relapsed, the face swelled and puffy, the lips blue. The child dies in a state of sopor, as if from asphyxia. This form is more fatal to children under two years of age than to those who are older. It is met with in children of six, or even occasionally nine years of age.

The application of leeches is of the greatest importance, since on this depends the result of the whole treatment. If a sufficient number of leeches be early applied to the neck and chest, we may regard the termination of the disease as probably favorable. Emetics do not appear to have much influence here, although they occasionally relieve the respiration.

The fourth form, which is designated by Dr. Zeroni as *aphthous croup*, is the most dangerous, but fortunately also the most uncommon; it has only been observed in autumn, during a continuance of stormy, cold, and rainy weather. It never occurs unattended by premonitory symptoms. The child is somewhat excited, occasionally flushed, and appearing from time to time to have transient febrile symptoms. As, however, it is cheerful, sleeps well, and has a good appetite, these symptoms are too often neglected, and the child is suffered to go out in the damp or cold, until at last it complains of pain on swallowing. On examining the throat, the tonsils are found to be somewhat swollen,

reddish, and covered here and there by a yellowish-white puriform investment. The submaxillary glands are swollen. The child continues, however, cheerful, and there is scarcely a trace of fever. The aphthous streaks or points now extend gradually more and more, approaching each other. On removing part of this investment from the tonsils, we find that the subjacent membrane is of a brownish-red colour, but not dry. Deglutition becomes more painful, but still there is no fever, and it is not till the fourth or fifth day that the symptoms assume a more serious character. Hoarseness comes on, a low singular kind of cough is heard, and occasional oppressive sensations are experienced. The disease soon runs its fatal course, and the child, after several days of indescribable suffering, dies in a state of sopor, under circumstances similar to those of which we have already spoken. A prophylactic mode of treatment seems the only one that is of avail in this form of croup; and, considering the nature of the disease, too much stress cannot be laid on those means of prevention under the control of parents —such as prompt attention to any symptoms of indisposition manifested by young children, and care not to expose them to the open air until all morbid symptoms are entirely removed; since Dr. Zeroni mentions that where once this aphthous affection of the tonsils was established, he never yet succeeded in saving the child; leeches, tartar emetic, and calomel being all without avail. The only means which he considers likely to produce a favorable result, are the external application of caustics, as suggested by Aretæus. Dr. Zeroni considers that this aphthous affection of the tonsils may occur in adults, although in their case he has never observed a fatal result. The disease may manifest itself alone, or conjointly with febrile diseases; but he has not found that in this latter case the local affection rendered any change necessary in the mode of treatment for the main disease.

The fifth form of croup, observed by Dr. Zeroni, is *suppurative croup*. This is invariably found to have been preceded by a fully developed catarrh, and usually occurs at the close of winter and the beginning of spring. It begins with more or less fever, restlessness, insomnia; the cough that was previously loose, becomes dry, rough, and barking, without being attended by a whistling inspiration, or a metallic sound. The cough comes on by fits, during which the child tries to sit up, bends the head forward, and puts its hands to its ears, tongue, or mouth. The attacks are not attended by choking, but cause distress by the continuance of the short broken cough. The child is hoarse from the beginning of the disease, but loses his voice entirely after a time; cases however, occur, in which the cough is at first loose, and the voice clear, but where there is much fever at the beginning of the disease, and even strongly marked delirium occurring at night. Fever gradually increases, the child sleeps almost continually, actual suffocative fits at length come on, the respiration becomes hurried, gasping, and rattling. The child is pale, and appears swollen; and finally, torpor supervenes, with an extremely quick pulse, and profuse perspiration, and the child not unfrequently dies in convulsions.

If the disease is neglected, it generally proves fatal to infants and very young children from the ninth to the eleventh day. In adults it

may be prolonged to the fourteenth or eighteenth day; in the latter case the attacks are much more violent. The suffocative attacks which generally supervene on the seventh day are most distressing: the child starts up with violence, tears, scratches, and bites everything it can lay hold of, often tearing its hair and biting its hands; it appears to be in most fearful struggle, and in the height of its agony, the hoarseness suddenly disappears, and it cries in a loud voice for help; the short cough becomes looser, and mucus is expectorated, the fever abates, and finally, the dreadful sufferings of the little patient terminate in symptoms of paralysis.

This form, like the others, demands a prompt and early application of leeches, which must be repeated with a frequency proportionate to the age of the child and the violence of the fever; it is almost the only thing to which recourse can be had, but as soon as the cough becomes somewhat less distressing, and the fever abates, a favorable termination of the disease may be hoped for; occasionally, however, much service is derived from cupr. sulph., given in sufficient doses to produce vomiting; this must be done when the cough and fever have abated, and the suffocative attacks have begun. The above forms of croup are only met with in children, and seldom after their sixth year. Dr. Zeroni scarcely attaches any faith to the opinion entertained by many, of the fatal nature of croup in adults. He says that he certainly has observed all the symptoms of croup most strikingly manifested in women, but these were found to depend on uterine derangement, and yielded to a mode of treatment adopted with reference to diseases of the latter kind; and he considers that where adults have sunk under croupous symptoms, they must be ascribed rather to œdema glottidis than to genuine croup.

Art. 83.—*Diseases of the Larynx in Infancy; their Diagnosis and Treatment.* By Dr. Blache.

Diseases of the larynx in general are not, it is true, very common in infancy, but the various maladies which that organ can be affected with during the first stage of life present a degree of gravity very different from that which they assume in the adult. On the other hand, croup, or diphtheritic laryngitis, is specially observed in children; its severity is excessive, and it is marked by many symptoms belonging to laryngeal disease. It is, therefore, of the utmost importance to physicians to be acquainted with their diagnostic signs, in order to avoid discreditable errors of prognosis, and in order to be enabled to have recourse to timely measures, and not to be taken unawares by serious and unforeseen circumstances.

Croup is a specific inflammation of the mucous membrane of the larynx characterised by the secretion of false membranes on its surface, and marked by three distinct periods. The first presents the symptoms of angina, the predominant signs being sore throat, accompanied by pain in the anterior part of the neck, and swelling of the maxillary ganglions; at the same time the tonsils are red and swollen,

the soft palate, tonsils, and pharynx, studded with small white patches, and the general symptoms are limited to loss of appetite and some febrile excitement. As soon as the larynx becomes engaged in the inflammation, the second period begins; the cough, loud and hoarse, resembles the barking of a dog, or crowing; the voice soon is totally extinguished, and its tone is harsh like the cough. Breathing is accompanied by a sound which recalls to the mind that produced by a saw working its way through a soft stone. At the same time dyspnœa appears, and the hand is carried towards the throat by convulsive action. Remissions often separate the attacks of suffocation, and asphyxia begins. Expectoration is sometimes absent, but occasionally causes the expulsion of false membranes. The third period is expressive of slow or rapid asphyxia, complete aphonia, laryngeal sonorous respiration, convulsive actions of the respiratory muscles, frequency and irregularity of the pulse, throwing back of the head, and extreme paleness, and somnolency. Death supervenes either in a paroxysm of suffocation, or from a sort of calm asphyxia, in a slow and progressive form.

Pseudo-croup, or laryngismus stridulus, deserves, on account of its frequency, to be well known, and to be distinguished from real croup. It is, like the latter, an acute disease, but differs from it by its sudden appearance, and the total absence of premonitory symptoms. It generally shows itself during the night. The child wakes in a state of suffocation, and makes vain efforts to breathe; the eyes are bloodshot, the face red and swollen, and the cough, loud and stridulous, is occasionally of a barking character, or resembles more closely croupal cough, being harsh, stifled, and of a metallic sonorousness. Respiration is sibilous; the inspiration crowing, and expiration usually silent. After the paroxysm, which is never so short as in spasma glottidis, the child falls asleep again, or, if the seizure has taken place during the day, returns to his occupations without preserving any of that sadness which persists throughout in true croup. In serious cases, the paroxysms are as frequent as in croup, but the remissions are complete. In mild cases the symptoms all subside after an alarming attack, the voice is hardly altered, and the pulse is natural. On examination of the throat no false membranes can be detected, nor are the cervical glands enlarged. A simple catarrhal bronchitis follows, and the child gradually recovers. When the case terminates fatally—an uncommon circumstance—cyanosis becomes general, and death occurs after several attacks of suffocation.

Spasma glottidis is an intermittent malady, characterised by very short fits of suffocation, separated by intervals of perfect health. The attack is ushered in by no warning. The respiration is suddenly arrested, as if the glottis was completely closed; during several seconds the child is threatened with suffocation; the mouth is widely open, the head drawn back, the eyes fixed, the face purple; after ten or twenty seconds, during which respiration has been altogether arrested, the patient quietly draws his breath, the attack being concluded by a convulsive, sonorous, crowing inspiration. In general, five or six consecutive paroxysms are observed; and during the attacks most of the functions experience some transitory dis-

turbance; the pulse becomes quiet and small; the pulsations of the heart irregular; the veins of the head distended, and involuntary evacuations take place. No cough, no laryngeal pain, no change of the voice, no redness or deposits are observed upon the mucous linings of the throat; but a peculiar symptom is noticed, viz. contraction of the extremities. At first the paroxysms are few and far between, but they gradually become more and more frequent, and at last occur every day, and even every hour. The frequent repetition of the symptoms at last occasions a state of general debility and suffering, somnolency makes its appearance, is soon followed by diarrhœa, and the patient dies from the progress of hectic fever, if he be not carried off in an attack of dyspnœa.

Simple laryngitis, presenting for its anatomical characters either redness of the mucous membrane, or ulcerations chiefly upon the inferior vocal chords, is symptomatically expressed by aphonia, or hoarseness of the voice, cough, slight acceleration of breathing, little or no fever, and no symptoms of asphyxia. The dyspnœa does not occur in paroxysms; in its severe forms the pulse is frequent, the face purple, the neck tumefied; at a later period the voice is completely extinct, suffocation is more and more marked, and death takes place from convulsions, or from propagation of inflammation to the bronchial tubes or to the pulmonary tissue.

Œdematous laryngitis, whether consequent (as in the adult) upon chronic inflammation of the larynx, or upon a general morbid condition of the subject, as in the dropsy which follows scarlatina, is marked by a difficulty of breathing chiefly appreciable during inspiration; the voice is unchanged, and death is brought on by asphyxia. If the œdema be considerable, it can be detected by the finger introduced into the larynx.

Hence, glancing generally at diseases of the larynx in infants, we may form three groups: in the first the nervous system is primarily affected (spasma glottidis); in the second the nervous and inflammatory elements are combined in tolerably equal proportions, as in laryngismus stridulus; in the third it is the degree of inflammatory action which constitutes the chief peril. A fourth group might be formed of those maladies in which the nervous element is altogether absent, as in simple laryngitis. These classifications naturally lead us to establish the treatment upon a rational basis. Spasma glottidis, an exclusively convulsive disorder, will require for its treatment antispasmodics, amongst which we will chiefly mention oxide and cyanide of zinc, assafœtida, musk, cherry-laurel-water, &c. In pseudo-croup, or laryngismus stridulus, in which the nervous and inflammatory elements combine, we might be induced to suppose that antiphlogistic remedies would be of considerable service. Experience does not, however, confirm this view; at the Hôpital des Enfans bloodletting is not in these cases found to be beneficial, and we greatly prefer the administration of ipecacuanha. If the disease be complicated with diphtheritic angina, all hesitation should be at an end, and the cauterization of the throat, with a solution of nitrate of silver (one third or one fourth to three or two parts of water) should be combined with the exhibition of emetics. In these maladies, as well as in œdematous laryngitis, where suffoca-

tion is imminent, tracheotomy should be performed. As to simple laryngitis, its danger mainly depends upon the propagation of inflammation to the bronchi and lungs. Emetics and contra-stimulant treatment should be put in requisition.

Art. 84.—*Treatment of the Diarrhœa of Infancy.* By Dr. West.

(*Medical Gazette*, July 14, 1848.)

In his treatment of the intestinal affections of infancy, Dr. West shows great powers of discrimination and therapeutic application. In the simple form he relies greatly on a well-regulated diet; but if the evacuations are abundant, but fæcal and unattended with tenesmus, he gives to a child a year old a mixture containing

℞ Magnes. sulphatis, ʒj;
Tinct. rhæi, ʒij;
Aquæ carui, ʒvij.
Dose—a teaspoonful every six hours.

In the diarrhœa of teething, he lances the gums where gingival tumefaction is very decided, but otherwise thinks the operation a needless infliction. In this form, instead of the saline mixture, he employs small doses of ipecacuanha combined with an alkali, from which he has derived great benefit. Three or four drops of liq. potassæ, and the same of vin. ipecac., are given in a little mucilage every four hours; and at the same time a powder of one grain of Dover's powder and one of hyd. c. creta is given at night. The warm bath is also an useful adjuvant.

Where astringents are required, he gives the preference to the extract of log-wood in combination with tincture of catechu, which is a valuable tonic as well as astringent. If the motions are slimy, he continues the night powder. If there is much acidity, a little soda is added to the astringent mixture.

In inflammatory diarrhœa Dr. West seldom considers depletory measures to be called for, but if leeches are used, he advises great caution to prevent unnecessary loss of blood. In these cases, if there is no great irritability of stomach, he thinks highly of small doses of castor-oil and laudanum, as below.

℞ Ol. ricini, ʒj;
Pulv. acac., ℈j;
Syrup. simp., ʒj;
Tinct. opii, ♏ iv;
Aquæ aurant. flor., ʒvij.
A teaspoonful every four hours.

Tenesmus is treated by laudanum and mucilage enema. Speaking of the still more severe forms of diarrhœa, the author's remarks are as follows:

"There are some cases in which, after the disease has passed its acute stage, it still retains much of its dysenteric character; the bowels not merely acting with undue frequency, but the evacuations containing mucus, pus, or blood, and their expulsion being attended with very considerable tenesmus. The strength in such *chronic* cases is very

greatly reduced, and emaciation goes on to a greater degree than in almost any other affection, with the exception of phthisis and mesenteric disease; while the bowels are excited to almost immediate action by even the simplest food. The treatment of these cases is attended with considerable difficulty; recovery, when it does take place (and it is consolatory to know that it often does, even from a condition apparently desperate), is brought about very slowly, and each remedy employed seems speedily to become ineffectual. Throughout their course two objects are to be borne in mind: one being to check the diarrhœa; the other to support the child's strength during the time required for nature to effect the cicatrization of the ulcerated mucous membrane, and to restore it to a state of health. The utility of mercurial preparations has appeared to me to be almost exclusively confined to the early stage of dysentery, and to cease when the disease has passed into the chronic form. On the other hand, astringents may now be employed with the most marked benefit, and, when one fails, another may be substituted for it. In cases where the stomach has been very irritable, so that almost everything taken has been speedily rejected, I have sometimes employed the gallic acid in combination with laudanum, and have seen much benefit follow from its use. At other times I have given the acetate of lead likewise with opium—a combination which, notwithstanding that decomposition takes place, yet retains its efficacy when given in the form of mixture. The sulphate of iron combined with opium is another highly useful remedy in these cases, and appears to have this advantage over the sulphate of zinc, which has likewise been used in similar cases,—that it does not excite the same irritability of the stomach.

"Our remedies are not to be confined to those administered by the mouth; for much may be done towards relieving the symptoms and curing the disease by suitable enemata. In some cases of unmanageable diarrhœa, M. Trousseau employs an enema of nitrate of silver in the proportion of a grain to an ounce of distilled water, with very good effect. I have never employed it, but have sometimes used the gallic acid as an enema, though not sufficiently often to be assured of its efficacy."

[The author concludes with directions as to diet, in which he advises weak animal broths in preference to farinaceous articles.]

Art. 85.—*On the Vaginal Discharges of Children.*

By R. C. Golding, M.D.

(*British Obstetric Record*, No. 15.)

The object of this communication is to consider the discharges from the genitals of female children, and to connect them with certain derangements of frequent occurrence with which they are associated.

On true gonorrhœa and noma of these parts it is not intended to dilate: suffice it, they are only of occasional occurrence, are most acute in their character, are characterised by well-marked symptoms, and are for the most part readily recognisable from those discharges—usually mucous—which mark certain chronic derangements of the general health.

The latter, though denominated vaginal, really proceed from the mucous membrane of the external generative organs, rarely coming from the vagina beyond the hymen.

These discharges depending on increased secretion from the vulva, consist of mucus, rarely of pus, unless the exciting agency be long kept up, or be of great intensity.

The strumous diathesis is the most usual predisponent of these affections: in such habits the mucous membranes of the natural outlets, where they join the common integument (as also the thinner portions of the latter), are peculiarly prone to inflammation, or to such frequent congestion, that the normal secretion of these parts becomes increased, and of such acrid quality, that the discharges consequent on such conditions perpetuate by their acrimony the lesion immediately inducing themselves.

Such is a characteristic of the mucous membranes and certain portions of the skin in strumous individuals, and is exemplified in the following diseases so often seen in such habits: ophthalmia tarsi, chronic inflammation of the Schneiderian membrane of the nose, aphthæ, and simple stomatitis of the buccal mucous membrane, chronic cynanche tonsillaris, eczema impetiginodes of the softer parts of the skin, strumous inflammation of the external auditory meatus, and of certain acrid discharges from the vulva.

Among entozoa, (also most prevalent in scrofulous children), ascarides are frequent: the irritation of the ascaris vermicularis in the rectum, with uncleanliness, is commonly the immediate cause of these discharges. The scrofulous diathesis is the most fertile predisposing cause, whilst the irritation of entozoa in the lower bowels, with uncleanliness of the parts themselves, are the most usual exciting causes of these diseases. The condition of the parts themselves may either be inflammation, when pus will be added to the mucus in the discharge, or, as is more usual, mere congestion: the secretion in both cases is abundant, acrid, and, if not removed, keeps up the irritation of the parts thus implicated.

The discharge proceeds from the mucous follicles with which these parts are abundantly provided (especially the vestibule and inner part of the nymphæ), as well as from the Cowperian glands. The symptoms attending these discharges vary with the intensity of the exciting cause, and to complications: thus ardor urinæ may be present from sympathetic irritation of the urinary mucous membrane, or painful parturition, from the passage of the urine over the external parts. Intestinal entozoa usually coexisting, there are many symptoms present due to their presence—irritation of the anus, restlessness, depraved (often ravenous) appetite, convulsions, and fetid ejections; phosphatic urinary deposits are often present; fever may exist, with aphthæ of the mouth, and strumous eruptions: these, when existing, complicate the case, and render its issue doubtful.

In gonorrhœa, the local symptoms are more urgent than in the instances just detailed: there is redness and swelling of the parts, with purulent discharge from the vagina beyond the hymen; whereas, in ordinary cases, the local symptoms are usually less distressing than are the constitutional, being in a direct ratio to the urgency of the latter.

When, however, gonorrhœa becomes chronic, the gluey discharge, though capable of generating itself when applied to other mucous surfaces, is so similar in physical characters to the ordinary redundant discharges of the same parts produced by other causes, that no difference is appreciable. The prognosis will be according to the length of time the discharge has lasted, and to the state of the system attending it. When of lengthened duration, the discharge may be so profuse that great debility may be induced; this, superadded to the strumous diathesis usually present, as well as to other concomitant affections, may lead to serious apprehension, tubercular deposition in the lungs and lymphatic glands being apt to supervene.

The treatment must consist of frequent ablutions with tepid water, so that the discharge may be removed as soon as eliminated, and thus cease to be a source of irritation. Mild astringent lotions may also be used; but, in most instances, tepid ablution is all the topical treatment necessary, inasmuch as the complaint either has a constitutional origin, or is kept up by constitutional causes, no means purely local will suffice.

Of hygienic and regimenal measures,—disregard of which is usually the cause of the production of this and other diseases in scrofulous subjects—warm clothing and bathing, sea bathing, when admissible, a plain, nourishing diet at regular intervals, moderate exercise, and plenty of sleep, are indispensable, both as preventive and curative means.

Of medicines, active purging with jalap, scammony, and calomel, with the infusion of quassia and dilute sulphuric acid administered as a tonic and vermifuge, are all which in most cases are needed, if used in conjunction with the hygienic and regimenal means mentioned above.

APPENDIX.

Synopsis of the Methods of Treating Asiatic Cholera, recommended by recent Writers.

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1. *Dr. Graves:* No faith in mercury. A scruple of acetate of lead with one grain of opium, divided into twelve pills; one to be given every half hour till the discharges diminish.

Clinical Lectures, 2d Ed. vol. i, p. 419.

2. *Dr. Wood,* Philadelphia: Calomel and opium, in small, repeated doses; acetate of lead, kino; cold water to drink; external warmth; diffusible stimulants.

Treatise on the Practice of Medicine, vol. i.

3. *Dr. Parkes:* First stage, bloodletting sometimes; acetate of lead, two to three grains, with a quarter of grain of opium, every half hour

for two or three hours; external warmth useless; large doses of calomel injurious; mustard poultices to epigastrium; cold drinks; diffusible stimuli. In *collapse*, bloodletting sometimes relieves. No treatment to be relied upon.

Researches on Algide Cholera.

4. *Dr. Milroy:* External warmth; saline emetics, as salt, one tablespoonful in a tumbler of water; turpentine stupe; salt or turpentine enemata; calomel when the vomiting has abated.

Pamphlet on Quarantine, 1847.

5. *Mr. Bell:* Bloodletting, if seen in three or four hours from invasion; quinæ disulph. grs. xij; ferri sulphat. grs. ix; aquæ Oiss. Dose not stated.

Medical Gazette, Jan. 1848.

6. *Dr. Black:* Small bleeding in stout subjects; calomel and croton oil repeated three times; then calomel with capsicum; enemata of warm water.

Prov. Med. and Surg. Journal, Jan. 26, 1848.

7. *Dr. King:* Cold water *ad libitum;* large doses of calomel.

8. *Dr. Turnbull:* Capsicum embrocations.

Lancet, Jan. 29, 1848.

9. *Dr. Arthur Wilson:* Warm mustard emetic; venesection where possible; neutral non-aperient alkaline salts; inhalation of oxygen.

Lancet, Nov. 4, 1848.

10. *Dr. Ayres:* Two grains of calomel and two drops of laudanum every ten minutes, as long as collapse lasts.

Lancet, Oct. 7, 1848.

11. *Dr. Henriques:* Quinine in large doses, in all stages; stimulant embrocations; injections of decoction of bark.

12. *Mr. Allen:* Large doses of calomel at the commencement; bleeding occasionally; mustard poultices to the spine and abdomen; enemata of hot salt and water.

Lancet, Oct. 21, 1848.

13. *Dr. M'Cann:* Mustard emetic; brandy and laudanum, and calomel and opium; stimulant embrocations.

Lancet, Oct. 21.

14. *Mr. Hird:* Mustard emetics, followed by acetate of lead and opium; stimulating apothems.

Lancet, Oct. 21.

15. *Mr. Jenkins:* Strychnia, gr. j; conserve of roses sufficient to form eighteen pills; one every quarter of an hour.

16. *Mr. Beaman:* Salt emetics; external warmth; then carbonate of soda in effervescence with lemon juice; external warmth.

Lancet, Sept. 2.

17. *Mr. Hancorn:* Emetics; diffusible stimulants, as ammonia, capsicum; hyd. c. creta; tinct. ferri sesquichloridi in concentrated form after every motion; sulphuric acid embrocations; hot-air bath.

Lancet, Sept. 9, 1848.

18. *Dr. Radcliffe Hall:* Five grains of tartar emetic in half a pint of camphor mixture; an ounce every two hours, till tolerance is effected.

19. *Mr. Brady:* In premonitory stage, ol. ricin. ʒiij; chloroform. ♏vj; tinct. opii, ♏xx; aquæ menthæ, ℥iss; f. haust. If reaction ensues, external warmth, sinapisms, and following draught and pill, repeated according to circumstances:

℞ Chloroformi, ♏viij,
Sp. vin. gall., ʒiij,
Aquæ, ℥ij. f. Haust.

℞ Fellis bovini, gr. iv,
Hyd. chlor., gr. iij. f. Pil.

Chloroform embrocations to the spine.

Medical Times, Oct. 14.

20. *Dr. Shearman:* Bloodletting, followed by transfusion of blood; respiration of oxygen and atmospheric air; tartar-emetic treatment.

Medical Gazette, Oct. 14.

21. *Dr. Paterson*, Rathkeale: Five grains of calomel, with thirty drops of laudanum, every four hours; then an enema, consisting of sulphate of copper, sulphate of zinc, and alum, a scruple of each in two ounces of cold water; a wineglassful thrown up every few minutes till retained; after retention for half an hour, a large warm-water injection.

Dublin Medical Press, Sept. 20.

22. *Dr. Cowan:* Thinks well of bleeding in robust persons; stimulating emetics; calomel and opium; effervescing salines *ad libitum;* external warmth.

Prov. Med. and Surg. Journal, Nov. 1, 1848.

23. *Sir James Murray:* A wineglassful of his fluid of camphor every ten minutes, with a few drops of laudanum, inflating the lungs with electrified air; galvanic discharges through the respiratory and spinal nerves.

Lancet, Nov. 4, 1848.

24. *Mr. Marsden:* Calomel and ginger; with powders of common salt, ʒij, carbonate of soda, ℈j, oxymuriate of potassa, gr. vij, every quarter of an hour till reaction ensues; hot salt baths; warm saline emetics.

Lancet, Nov. 4, 1848.

25. *Dr. Willemin* and *M. Moreau:* Cannabine, the active principle of Indian hemp. The preparation a tincture of the strength of one grain to ten drops of alcohol; dose, ten to fifteen drops.

Lancet, Nov. 4, 1848.

26. *Dr. Hill:* Place the patient in a warm bed; give internal stimulants; friction with warm flannels; external heat; chloroform inhalations repeated at intervals.

Lancet, Nov. 4, 1848.

REPORTS

ON THE

PROGRESS OF THE MEDICAL SCIENCES,

July—December 1848.

The intention of the following Reports is to pass in review the principal additions to each department of Medical Science, which have been placed on record during the preceding six months. It is not contemplated that they should be confined exclusively to the notice of what is new; any fact or doctrine which may be considered practically useful, will, although not strictly novel, be regarded as worthy of commemoration. It must be obvious to all who are aware of the immense mass of information which is almost daily put forth by the medical press of this and other countries, that the notice of every subject would be an impossibility. It therefore devolves upon the writers of each Report, to select only such articles for retrospection as may possess superior recommendations, either of an intrinsic character, or in relation to the main end and aim of all medical knowledge—the alleviation of suffering and disease.

I.

REPORT ON THE PROGRESS OF PRACTICAL MEDICINE, PATHOLOGY, AND THERAPEUTICS.

BY THE EDITOR.

PART. I.—GENERAL PATHOLOGY.

As faithful chroniclers of the progress of Medieal Science, it is our duty not only to notify the advanee of each and of all its departments, but also to remark upon any arrest in the stream of improvement when such is observable. We feel, therefore, bound to state that the semestrial period upon which we have now to report has been more than commonly unprolific in the department of practical medicine, so much so, indeed, that it has not been without difficulty that we have been able to select from the numerous sources at our command sufficient valuable matter to make up our ordinary number of pages. This deficiency is to be accounted for partly by the fact that the attention of the profession has been lately directed into other channels by the attraction offered in the subjects of ether and chloroform inhalation; but it is mainly due to the falling off observable in the foreign journals, the greater portion of which have been chiefly occupied by surgical eommunieations arising out of the events by which the Continent has recently been, and is at this moment, disturbed.

—Among the newly published works which have reached us for notice in the present Report, we would make particular mention of a 'Treatise on the Practice of Medicine,' 2 vols. 8vo, by Professor Wood, of Philadelphia, as a production of no ordinary merit. It may be safely stated to be, for comprehensiveness and eareful digest of matter, second only to the herculean labours of Dr. Copland, and has the advantage, not always perceptible in similar works, of being brought up strictly to the knowledge of the day. It must not, however, be looked upon solely as a compilation, for although, as must of nccessity be the case, it is a digest of the opinions of the most reputable authorities; it is also enriched by the record of the actual experience of a physician whosc opportunities of observation have extended over a period of thirty years, and who enjoys the reputation of being one of the most skilful and scientific practitioners of our sister country.

—We have also, through the politeness of the publisher, an opportunity of directing the attention of our readers to a second edition of Dr. Graves's Clinical Medicine, issued under the superintendence of Dr. Moore Neligan.* The reputation which these lectures have already attained is such that a further tribute of praise is almost unnecessary, but we should not be doing justice did we not state that, by the judicious alterations in the arrangement of the old text, and the introduction of several lectures not included in the past edition, the present volumes have been much enhanced in value. Among the latter, as of direct interest at the present moment, we would particularly allude to the author's lecture on cholera. The lectures on fever, which constituted so valuable a portion of the original volume, have also been much altered in arrangement, and extended by a history of the late epidemic. In fine, every subject treated of has the advantage of being perfected by the experience of the author subsequent to the publication of the first edition.

* Clinical Lectures on the Practice of Medicine, 2d Ed. 2 vols. 8vo.

§ I.—*Zymotic Diseases.*

1. *Typhus and Typhoid Fever, Diagnosis of.*—The readers of the 'Half-yearly Abstract' have, at various times, been made acquainted with the discussions at home and abroad upon the identity of typhus and typhoid fever. In addition to the opinions mentioned in former Volumes, we shall here adduce those of two of the latest writers on the subject, Dr. Wood and Dr. Wilshire.

Dr. Wood, whose opportunities of witnessing the two forms of fever have been such as are afforded only in America, where they both rage with nearly equal intensity, expresses himself as follows on the means of distinguishing them:

"Typhus fever less frequently commences insensibly than enteric (typhoid), and is upon the average of shorter duration. Instead of diarrhœa, or the susceptibility to purgatives, which attend the latter disease, there is usually constipation; and the fæcal discharges are darker and more offensive. Hemorrhage from the bowels, which is not infrequent in the advanced stages of enteric fever, seldom occurs in typhus. In this complaint, epistaxis at the commencement is less frequent, there is more stupor, and a darker colour of the face, more turbidness of the conjunctiva, and greater debility. The eruption in typhus also differs from that of enteric fever. It generally commences earlier, is not elevated, is of a darker hue, does not so readily disappear under pressure, is much more abundant, and, instead of being confined to the abdomen and chest, is diffused over almost the whole body. In typhus, the abdomen is often flat, and perfectly free from tympanitis; which is never the case in enteric fever.

"The anatomical characters of the two fevers are very different. The peculiar disease of the glands of Peyer, and of the mesenteric glands, so constantly present in enteric fever, is never found in typhus, or so seldom, as to lead to the suspicion of an intermixture of diseases when it does occur. The spleen is less frequently enlarged and softened in typhus.

"Enteric fever almost never attacks the old, who are frequent victims of typhus. The former disease is endemic in various countries, arises here and there without obvious cause, and, if ever contagious, is very feebly so; while typhus seldom occurs in isolated cases, is always contagious, and often epidemic."

Nevertheless, the author admits there are cases of a mingled character, in which the elements of the two fevers may be supposed to coexist.*

—The observations of Dr. Wilshire, which occur in the course of his valuable lectures on the diseases of infancy, are recapitulated briefly in the following tabular arrangement:

Typhoid Fever, Adynamic Fever, Asthenic Fever, Low Fever, &c., of France and Great Britain, &c.	True Typhus, Contagious Typhus, True Maculated Fever of Great Britain, &c. &c.
NOT INFECTIOUS.	EMINENTLY INFECTIOUS.
Cutaneous eruption often wanting; does not appear so early; more of the nature of petechiæ; does not disappear under pressure; no true exanthem.	Cutaneous eruption a true exanthem; different from petechiæ, which may accompany it; former of a reddish-pink colour, disappear under pressure, soon to return on removal of it: sometimes dark, like measles, and not removable by pressure.

* Treatise on Practice of Medicine, vol. i, p. 346.

Cerebral symptoms not appearing early; not so frequent.	Early delirium, stupor, or typhomania.
Course prolonged, fifteen to thirty days; relapses common.	Period of crisis about fourteenth day; relapses unfrequent.
Not common before fifteen years of age, nor after fifty.	Children often attacked when the disease is epidemic.
Attacks those predisposed to a febrile affection by exposure, vicissitudes, or is sporadic.	Generally presents itself as an epidemic, and may attack any one coming within its sphere.
May occur under milder grades of the causes of typhus, or entirely without them; is sporadic.	Caused by the same—by famine as a predisposing cause; epidemic.
Derangement of alimentary canal constant; important alterations connected with the intestinal follicles found; spleen large; intestinal perforation frequent.	*Post-mortem* results often negative, and when lesions are present, they bear no comparison with the severity and rapidity of production of those of typhoid fever.*

2. *Typhus Fever, Exanthematous Nature of.*—Contrary to the opinions expressed by the writer last mentioned, Dr. Williman has endeavoured to prove that typhoid fever is a true exanthem, and as such should be placed in the same category with other eruptive fevers. He bases his opinion upon their similarity in the fact of incubation, in the presence of a distinct eruption, in its prevalence consentaneously with other eruptive diseases, and, like them, in the subjects of it becoming exempt from a second attack. The analogy is further exemplified in a comparison of their respective pathological lesions.†

3. *Influence of Warm Baths in Typhoid Fever.*—In former Volumes we have given evidence of the great advantages to be derived in the treatment of fever from the external use of cold water, the results of which have been a more speedy restoration of the functions of the skin, and a proportionately rapid amelioration of the general symptoms of the disease. The same object, viz. the restoration of the cutaneous functions, is aimed at by the employment of warm baths; the utility of which is much insisted upon in a recent memoir by Dr. Hervieux.‡

It would be a needless occupation of space to give this author's observations *in extenso*, as the subject is treated with the discursive verbiage characteristic of many of his countrymen's writings; but it may be stated briefly that, under the use of tepid or warm baths, repeated daily or oftener, according to circumstances, he has noticed that the pulse improves in volume and softness, at the same time that its frequency diminishes, that the cerebral excitement is allayed, the tongue becomes moister, and, finally, the skin becomes more supple, and perspirable.

4. *Typhus Fever, Convulsions in.*—Mr. Aitken relates five cases of fever occurring within a period of twenty-one days, all of which proved fatal by convulsions. The author hesitates in fixing upon an explanation of so unusual an occurrence, but is inclined to associate it with the presence of morbid matter in the blood.§

5. *Congestive Fever.*—This fatal form of fever, happily unknown in our country, is the subject of an essay by Dr. Lavender.‖ Congestive fever, or "pernicious" fever, as it is called by Dr. Wood, is a form of disease in which the vital powers are depressed by the miasmatic poison to a degree in the great majority of cases incompatible with successful reaction. In its access and ante-

* Lectures on the Diseases of Children.—Medical Times, May 20, 1848.
† Charleston Medical Journal, July 1848. ‡ Archives Générales, April 1848.
§ Monthly Journal, June 1848. ‖ Amer. Journ. of Med. Science, July 1848.

cedents, Dr. Lavender observes that it is not to be distinguished from ordinary intermittent; but when once set in, there is a greater amount of vital prostration and præcordial anxiety. His general description of the symptoms, which is for the most part identical with that given us by Dr. Wood (Op. cit.), is as follows: There is great thirst, with a tormenting sense of internal heat; the surface is cold, and bedewed with perspiration; the countenance is expressive of alarm; the pulse small, or almost imperceptible; there is vomiting and diarrhœa; and, in fact, the disease in many respects closely resembles algide cholera. Death takes place either by coma or convulsions. The fatal moment is sometimes delayed by the free use of stimulants, and at other times partial reaction takes place, and the skin becomes warm: but soon another paroxysm ensues, and the patient is again collapsed. A third paroxysm, according to Dr. Wood, is invariably fatal.

In order to arrest so formidable a disease, the promptest treatment is required. The various remedies are spoken of in succession by Dr. Lavender. Bleeding requires great caution, and should, he observes, be always combined with the use of stimulants; but, on the whole, he condemns loss of blood, whether general or topical: in which opinion he is energetically supported by Dr. Wood. The author further alludes to a condition which is very likely to betray the inexperienced practitioner into bleeding. This is when the congestive attack having yielded to quinine, the surface becomes warm, the pulse full; there is at the same time a feeling of restlessness and apprehension, with headache. If the attendant is induced to take blood under these circumstances, the author considers that fatal collapse will be induced to a certainty, either immediately or a few hours after.

The great remedy is quinine in large doses. The author states that from 5 to 20 grains should be given every hour, until its characteristic effects are produced, or amendment declares itself. Dr. Wood gives 2 grs. calomel, 2 grs. quinine, and 2 grs. opium every hour, alternating with acetate of lead, kino, and opium, and combined with external warmth. When an interruption or remission is thus obtained, his practice is to get down from 30 to 60 grains of quinine before the period of the next paroxysm. If the stomach is too irritable to bear it, he gives it per anum in double the quantity. (Op. cit. p. 295.)

The nature of this fatal fever is a matter of doubt, even amongst those who have the most frequent opportunities of witnessing it. Dr. Wood shows good reason for believing that the miasmatic poison in some manner destroys the balance of innervation, and that to this loss of previous power the congestion and other symptoms stand in the relation of consequences. (Op. cit.) The same view is substantially maintained by Dr. Bartlett.*

6. *Paludal Cachexia.*—In connexion with marsh fevers, we may briefly allude to a communication by M. Duclos on the peculiar state of system to which the paludal poison gives rise, and which he calls paludal cachexy. This condition, he states, declares itself in two ways—coming on gradually and insidiously, or as the result of repeated attacks of intermittent. In either case its effects are much the same, and consist in the gradual decadence of the functions, flaccidity of the muscles, pallor of the skin, and debility, to which, as the impression becomes more profound, are added, anasarca, and effusions into the serous cavities.

Of these symptoms, the pallor and debility are generally the first in the series. The skin and mucous membranes put on the appearance of confirmed chlorosis, the appetite diminishes, and, finally, the dropsical symptoms appear.

* Fevers of the United States, p. 532.

Consentaneously with these, certain changes take place in the liver and spleen. Hypertrophy of the spleen is almost a constant phenomenon; the same state of the liver is not so frequent. In seeking an explanation of these different phenomena, M. Duclos states his belief that the starting-point of the disease is an alteration in the blood, consisting in a loss of globules, with positive increase in the proportion of water. In what manner paludal emanations operate in inducing these changes he does not attempt to decide. The treatment consists in removal of the patient from the marshy district, with the exhibition of quinine and chalybeates.*

7. *Antagonism of Intermittent and Phthisis.*—An elaborate memoir has been published by M. Renzi, in elucidation of the question of the mutual exclusion of the above diseases, the reality of which is maintained by many. The author, who has been at some pains to gain information from physicians residing in marshy localities, determines that there is no foundation for the opinion.†

8. *Cholera.*—In a former page (p. 222) we have given a few of the numerous methods of treating this disease which have recently appeared. From them we can draw but one conclusion—that the disease is not one whit better understood now than in 1832; and that our treatment of it will be as grossly empirical as at that period. Government has decided, apparently to its own satisfaction, that the disease is not contagious, but with rare consistency enforces quarantine as strictly as heretofore. Should the disease again be rife among us, which there is too much reason to fear will be the case, we trust, for the credit of our profession, that it will be studied in a more philosophical manner than has yet been done, and that men will abstain from rushing into print with their one or two cases *cured* (?) by this thing and the other thing, but rather wait till the accumulation of their facts shall give them justifiable data for forming an opinion.

—In Dr. Graves's Clinical Lectures (2d edition), the distinguished author has included an elaborate and faithful history of the rise and progress of this pestilence during its last outbreak; in the course of which he gives the strongest evidence of its contagious nature.

With respect to the treatment, the author's experience may be summed up in a few words. He, at first, tried the calomel plan; but finding it utterly fail, he was induced to make trial of the acetate of lead, from which he derived the best results. His plan is to give one grain of the acetate with the twelfth of a grain of opium every half hour, till the discharge from the stomach and rectum began to diminish.‡

—Among the host of medicines employed in the treatment of cholera, there is none, presuming the evidence to be trustworthy, which has appeared more flattering than chloroform given internally and by inhalation. Of the former mode of exhibition, cases are recorded by Mr. Brady§ and Mr. Stedman.‖ In the former instance the patient was in an advanced stage of collapse, with excessive spasm, when the narrator gave a draught consisting of 20 drops of chloroform, and the same of turpentine in brandy, with the effect of relieving the thirst, and tranquillising the irritability of the stomach and bowels; a second dose was followed by decided symptoms of reaction, which ended in recovery. As soon as the stomach was quieted, a pill, consisting of five grains of calomel and oxgall, was given.

Mr. Stedman's case was equally severe, and equally successful under the same treatment. (See Abstract, p. 12.)

* Encyclograph. des Sciences Médicales, Avril 1848.
† Gaz. Méd. 31, 1848.
‡ Op. cit. p. 419.
§ Medical Times, Aug. 12.
‖ Ib. Aug. 23.

—The evidence in favour of the inhalation of chloroform is of the most flattering kind. Dr. Hill* states that he has employed it in the Peckham Lunatic Asylum, in ten cases, with the most complete success; in one who was fast sinking it was used with the abatement of every bad symptom. Time will speedily show whether these results are confirmed by other observers; if so, Dr. Simpson, as the discoverer, will be entitled to a still higher meed of praise than has yet been accorded to him.

—An important fact has been elicited from the examination of choleraic blood by Dr. Garrod, viz. the large amount of urea which it contains, larger than in any case of Bright's disease which he has examined. This disclosure might have been anticipated as a consequence of the suppression of urine, but, to the best of our belief, it had not been previously demonstrated.

9. "*Ochlesis.*"—Dr. George Gregory has recently made a communication, the object of which is to give a brief sketch of the evils which result from the accumulation of a vast number of sick persons under one roof. The author designates the general condition of disease produced under these circumstances by the term "ochlesis," derived from οχλος, a crowd. The normal type of the disorder is erysipelas of the face; but there are a vast number of allied affections which appear at different times with it, either separately or in combination. These are, erysipelas of the extremities, especially affecting wounds or sores; tracks of erythematous redness, following the course of the chief absorbent trunks, and terminating in abscesses; cellular inflammation of the lower limbs, or phlegmasia dolens; cellular inflammation of the neck, leading to abscess, cynanche, otitis, glossitis; inflammation of the joints, terminating in purulent effusion; spontaneous gangrene of the genitals and of the extremities; gangrene supervening upon wounds or sores; spontaneous gangrene of some portion of the trunk of the body, especially in new-born children; gangrene of the umbilicus. Instances of pure fever, of a low type, from the same source, are not uncommon. Diarrhœa sometimes is the result, from the mucous membrane of the bowels becoming affected; and in the wards of lying-in hospitals the "ochletic" miasm expends all its virulence on the peritoneum. The author has seen an asthenic form of laryngitis produced by the same cause, and believes that the pneumonia which springs up in hospitals has likewise its source in the contagious ochletic miasm. This miasm too, he thinks, produces the excessive depression which attends the worst cases of sea scurvy, and he has seen it occasion, in the Smallpox Hospital, a state resembling, in all respects, scurvy itself. All the disorders originating in the ochletic miasm are characterised by a low condition of the vis vitæ, and intractability. The experience of the Smallpox Hospital during many epidemic visitations, especially in the years 1842, 1844, 1847, and 1848, has convinced the author of the fact, that all the diseases which he has enumerated may arise from the same miasm. Contagious peritonitis is perhaps the only form of the ochletic malady that he has not seen at that hospital during the last twenty-five years; but he regards it as quite certain that this is "part and parcel" of the same disease. The chief agent in the production of ochlesis is, certainly, the crowding together of the sick in one spot; but matters are made much worse by unfavorable locality, by dampness of the surrounding soil, imperfect drainage, or choked sewers, by deficient ventilation, by the character of the cases congregated, by neglect of personal cleanliness, by the employment of unpurified bedding, and by inefficient purification of the wards. Since, however, the ochletic miasm is evolved only at certain times, a peculiar, but unknown, condition of the atmosphere must concur towards the actual result.

* Reported in Times of Oct. 30; in Lancet, Nov. 4.

The ochletic miasm appears to attach itself strongly to the walls and floor of the apartment,—hence the use of covering the floor with a mixture of quicklime and water, of lime-whiting the walls, of fumigating with nitric acid or chlorine, &c. The great means of checking the development of ochlesis, however, is to restrict the admission of patients, and to leave the infected ward unoccupied for a certain time.

10. *Hydrophobia.*—We embrace the present opportunity of laying before our readers the more recent contributions upon this obscure subject. In the first place, we shall notice certain experiments on the action of saliva by Dr. Wright of Birmingham, the bearing of which upon the etiology of this dreadful malady will at once be evident. We quote from a review of the German edition of Dr. Wright's work on the Saliva, in Forbes's 'British and Foreign Medical Review,' Jan. 1847; the first experiment is thus described:

"Four drachms of slightly alkaline saliva, sp. gr. 1·010, were ejected into the right external jugular of an old mongrel dog. Immediately after the fluid had passed, the animal uttered a loud yell, and struggled violently; the heart palpitated with vehemence, and respiration became very hurried and irregular. When six minutes had elapsed, and the severe effects had subsided, other four drachms of saliva were injected. The heart's action again became so quickened that I was unable to number its beats; the pupil was contracted; the abdominal muscles underwent a long spasm, and there was slight convulsion of the whole frame. At the expiration of ten minutes, the injection was repeated; it had the effect of increasing, but not remarkably, the action of the heart and lungs; the spasm of the abdominal muscles again returned, and a quantity of bile and frothy mucus was ejected by vomiting. When thirteen minutes and a half had elapsed, an abundance of turbid urine and fæces mixed with blood were passed; severe tenesmus succeeded, accompanied also by slight priapism. At the expiration of twenty-five minutes, when the system was comparatively calm, the pupil a little dilated, but sensible to light, and the heart beating seventy-two strokes per minute, I injected the remaining four drachms of saliva into the vein. The symptoms which attended the first injection instantly recurred, but with increased violence, and continued, with trifling remissions, for nearly four minutes, after which time their severity subsided. At the end of forty minutes, there was slight convulsion of the whole frame; an offensive slimy dejection was passed, to all appearance involuntarily; and shortly afterwards, about half a pint of bloody urine escaped in a similar manner. When three hours had elapsed, the animal seemed to be tolerably calm and comfortable; he ate a little meat, and lapped milk and water; he was then left for the night.

"It was observed on the following morning that he had made a great quantity of water, and that he had been purged and vomited several times. He now looked drowsy and stupid; his eye was dull, watery, and injected; he was disinclined for sport and exercise; he ate little, but drank abundantly; respiration natural; pulse 86.

"In three or four days the animal recovered his usual hearty and lively habits, and little notice was taken of him until the morning of the fifteenth day succeeding the experiment, when he was observed to look drowsy and dejected; his eyes were peculiarly downcast and inflamed; he refused to stir when called, and when approached, he uttered a growl expressive of anxiety and anger; his nose was dry and warm; paws cold; respiration irregular and quick; pulse 94. He lapped water or milk, but refused solid food. He continued in this state throughout the day, passing one very offensive, dark, slimy stool, and voiding, at several efforts, a great quantity of turbid bilious urine.

"On the following morning, the symptoms of the previous day were much aggravated; the dog growled and snapped at every thing, living and lifeless, that approached him. My assistant in alarm ran away, and the other attendants being terrified at the dog's madness, deserted me also, and I was consequently left to manage him alone. By unobservedly seizing him at the back of the neck with one hand, and grasping him tightly, I was enabled to raise his lips with the other, when I observed that his mouth was filled with foam, and that his gums and cheeks were much swollen and inflamed; his nose was very dry and hot; paws cold and tender; respiration interrupted, with frequent sighing; pulse 106. So long as I held him in my grasp, he seemed quite docile and contented, but the moment I loosed my hold, he ran furiously at me, and but for a strong chain which secured him to the wall, I have no doubt I should have suffered from his bites. In a few hours, the froth began to distil from his mouth; he was tortured with thirst, and lapped water eagerly and without dread; indeed he plunged his mouth and face into the cold liquid, as if to relieve the heat and inflammation which troubled him; with the same intention he licked the cold wall and floor, but he would not touch any warm body, nor would he lap tepid water. He was remarkably irritable and restless, and when not snapping at objects that approached him, was constantly turning about, or chewing the sand and straw that were near. He was seen in the afternoon of this day by Mr. Bowker, surgeon, and by several other scientific friends, all of whom were decidedly of opinion that he was the subject of madness. In the evening his restlessness somewhat abated, and he lay moaning in a husky voice, occasionally altering the position of his head as if anxious to sleep. Thirst and salivation were diminished; eye dull and glossy, pulse 64, nose dry, extremities cold. He continued in this state, with increasing weakness and somnolency, until about five o'clock on the following morning, when, after a few struggles and signs of suffocation, he died.

"*Sectio cadaveris, six hours after death.*—The limbs were remarkably rigid, but the blood was everywhere uncoagulated, and presented scarcely any distinction between arterial and venous. No ptyalin could be found in it. The right cavities of the heart were gorged with blood, the left auricle was also full, and the left ventricle empty. The lungs were moderately crepitous, and unusually vascular; the air-cells and bronchi contained an abundance of mucus. The lining membrane of the trachea was vascular, and the redness extended to the membrane of the mouth. The gullet was also unnaturally florid, but the stomach and intestines contained nothing unusual. The stomach contained a quantity of straw, sand, and coal. The viscera were natural. The brain exhibited venous congestion upon its surface, and a little bloody serum at its base; but in other respects it was healthy."

The second case is of the same interesting character:

"Six drachms of neutral saliva, sp. gr. 1·008, were introduced, at three separate injections, into the right common carotid of a mongrel dog. Each injection was followed by an extraordinary increase in the heart's action; hurried, irregular respiration, and general convulsion. The symptoms closely resembled those detailed in a similar experiment, especially in the inability of the animal to walk in a straight direction, and his consequent movement in a circle; the inclination was always towards the vessel which had received the injection. The stage of excitement lasted for five hours, during which time the animal passed an abundance of urine, vomited, and was purged several times. At the end of six hours, slight coma supervened; respiration was deep and stertorous; heart's action slow and laboured; sensibility diminished.

"On the following day there was considerable reaction, and the animal manifested strong signs of irritability and excitement. On the evening of this

day I was called from home, and was unavoidably absent for a week. On my return I learnt that, on the second day succeeding the experiment, the dog became calm and docile, ate and drank very well, and appeared not to suffer pain or inconvenience of any kind. In this state he continued until the morning of the eighth day, when, on being visited with his breakfast, he flew at the servant, who narrowly escaped him. The door of the place in which he was kept was divided horizontally in two, so that by shutting the bottom half, he could be conveniently watched over it. He was described to me as frothing considerably at the mouth, and appearing very fierce in the eyes, which were deeply reddened. He wandered about incessantly, chewing straw or sand, or lapping a little water; but he refused all kinds of solid food. He was shortly left to himself, when he began to gnaw the bottom of the door, which he finally demolished to an extent sufficient for his escape. On my return home in the evening of this day, I discovered him in the middle of a field contiguous to the house, surrounded by half a dozen men, who, with sticks, forks, and spades, were variously endeavouring to get him back into the stable. It was sufficiently ludicrous to see such an amount of human strength and ingenuity successfully combated by a single brute; but the men were in thorough trepidation, from the manifest signs of madness the dog exhibited. He snapped furiously at everything that approached him, and would occasionally pursue one of his opponents, until, tired by this effort, he was compelled to stop for breath. When I saw him he was staring wildly, and a quantity of frothy saliva was distilling from his mouth; the anterior part of his body was covered with this foam. I put a strong glove upon my right hand, and whilst the dog was engaged in snapping at a stick held before him, I caught him by the back of the neck. He struggled violently at first, and seemed to be choking, but finding resistance useless, he became perfectly quiet and composed. From an experience of the treachery of the animal in a previous experiment, I did not venture upon loosing my grasp until having examined the state of the eyes and mouth, both of which I found to be unusually vascular, and the pulsations of the heart were 140 per minute, when I had a collar with a strong chain placed round the dog's neck, after which he was reconducted to his stable.

"He was visited again in an hour, but there was no observable decrease of irritability or restlessness; he snapped at everything that came in his way, and was incessantly changing his position. He lapped a little water, but the only solid matter he would chew were fragments of sand and coal. On the following morning he was much in the same state, but less inclined to bite; his mouth was still very frothy, and his eye deeply reddened; respiration rather stertorous; pulse 98. The irritability and restlessness increased towards evening; he would allow nothing to approach him without snapping at it; he was constantly engaged in licking the cold wall, or chewing straw, sand, or coal, or dragging himself upon his belly over the rough ground. On the morning of the tenth day he was somewhat improved; he ate a little meat, and did not snap unless suddenly roused; the salivation was less, and the eye appeared to be brighter; there was no stertor, and the pulse was 84.

"From this time the signs of madness diminished, and the dog seemed to be improving in health and strength until a fortnight had elapsed, when there occurred a most offensive discharge of the nose and ears; it was greenish-yellow in colour, excessively fetid, acrid, and corrosive, for it excoriated the parts over which it trickled, and finally caused the entire of the nose and one ear to slough away. In a few days the dog became quite blind and deaf, though he did not diminish in strength, and he ate very heartily of meat, which was plentifully supplied him. He did not appear to suffer any pain, and was

seemingly very quiet and contented. He continued in this state for more than three weeks longer, at the end of which time I was compelled to leave home. I learnt, however, that ulcers subsequently appeared in different parts of his body, and were succeeded by gangrene of the extremities, of which he died. The body was in a state of putrefaction before death. This animal was several times seen by my friends Drs. Hutchinson and Taylor, and Messrs. Massey and Thompson, surgeons, of Nottingham."

To determine whether the mere animal matter of the saliva had any share in producing the above phenomena, Dr. Wright performed the following experiments:

"I injected a drachm of isinglass, dissolved in two ounces of water, into the carotid artery; a little temporary excitement was the consequence, but the animal suffered no further inconvenience.

"I injected a drachm of pure mucus, diffused through an ounce and a half of water, into the jugular vein; the heart was a little quickened, and respiration was correspondently hurried; but the effects completely subsided in twenty minutes.

"I injected the entire white of an egg, diffused through two ounces of water, into the left common carotid of a dog. It produced considerable cerebral excitement, which was succeeded by drowsiness and feebleness of the limbs that continued for several hours; but the symptoms were very mild, and their duration inconsiderable."

The bearing of these experiments on the momentous question of the etiology of hydrophobia will occur to every reader, and we think the author uses a due discretion in speaking doubtfully on the subject.

"Concerning the production of canine madness by the injection of saliva into the blood, it is not now my intention to speak. It will, however, be sufficiently evident from the experiments already cited, that saliva is capable of exerting a very marked influence upon the brain and nervous system. The spasm, convulsion, and coma which were consequent upon the introduction of saliva into the arteries and veins, are conclusive proofs of its activity; whilst the absence of all such symptoms on the injection of the other animal fluids into the circulatory system demonstrates that, not to any physical or mechanical influence, but to a peculiar property inherent in itself, is saliva indebted for the manifestation of its physiological action."

"A late number of the 'Veterinary Record' contains the translation of a paper on rabies by Dr. Eckel, an abstract of which appears in the 'Lancet' (Oct. 10, 1847). It appears from these researches that, contrary to the usual opinion, which attributes the disease in the dog to the influence of heat and thirst, that the greater number of cases occurred in February and May. The disease was also observed to affect chiefly animals in easy circumstances, and more commonly in mongrel than in well-bred dogs. The large proportion were dogs; of 141 cases there were only 15 bitches, no instance was known among castrated dogs. The disease seldom attacked watch-dogs, or those employed in labour."

The malady can only be well defined during the period of its development, and that by three characteristic phenomena:

"1st. The accession of fury, with inclination to bite.

"2d. The change in the voice, and the bark.

"3d. Paralysis of the inferior maxilla.

"These three symptoms are constant and pathognomonic. The invasion can only be perceived by the master of the dog, or one who is intimately acquainted with the natural disposition and habits of the animal, and who submits him to a careful examination. In the room the disease shows itself

by the animal exhibiting a great deal of anxiety; he gets up and lies down again—seems uneasy—forsakes his accustomed place—his habits are perverted—one moment he will obey the voice of his master with astonishing punctuality, the next moment he pays not the slightest attention to him, or if he does, it is with repugnance—he keeps constantly near the door—he tries to get out, without having any occasion to satisfy his natural wants. The urinary and fæcal evacuations are scanty; to which may be added, the loathing of food, in particular, animal food, and a desire to drink cold water, or cold milk, without, however, partaking of much at a time.

" Out of doors he follows his master with reluctance, and without the least sign of satisfaction or pleasure. Contrary to his usual custom, he walks behind him, and his attention is only excited when he meets with other dogs, cats, or birds, which he tries to reach, and even to bite. He picks up and swallows all sorts of filth and rubbish, such as the excrements of other animals, dirt, old leather, bits of cloth, &c.

" These symptoms are aggravated on the second, or, at the latest, on the third day, when the appetite becomes entirely lost—the animal, when at liberty, furtively forsakes his home, bites all animals it meets with, and even man, if obstructed or tormented by him. After several hours' running he returns to his home exhausted, throws himself in some obscure corner, and allows himself with difficulty to be approached even by his master. It becomes, then, most dangerous to use constraint, but with kind usage he may be made to obey. If in this state he is not watched, he again runs away, and never returns; if, on the contrary, he is carefully watched, he may yet continue to follow his master, but bites all dogs, cats, or other animals in his way, without allowing himself to be intimidated by the voice of his master, after which he will again return to him, and allow himself patiently to be muzzled by him, and will even follow him, if kindly treated. In this manner, observes Dr. Eckel, many dogs attacked with the acute form of rabies have been brought to the Imperial Veterinary Institute of Vienna by their masters, even without muzzle or chain. These dogs are very quiet if treated with kindness; but as soon as they are shut up in their cages, and see other dogs, or even hear them, the accession of rage takes place, and they furiously gnaw their litter, the sides, floor, iron bars, &c., of the cage; and when living animals, such as small dogs, pigs, or sheep, are brought near them, their fury for biting redoubles; their carnivorous instinct then reaches its acme—they put themselves in the position of the tiger ready to spring on its victim. These paroxysms occur several times in the day, even without any apparent existing causes. After each paroxysm, dogs will generally gladly lap some clean water, but deglutition is difficult; they either lie down or sit on their haunches, and make themselves heard by a frequent bark, the muzzle being turned upwards. This bark is peculiar and characteristic—*sui generis*. It is something between the ordinary bark of the dog and the howl. In the beginning the voice is sonorous and metallic, afterwards it becomes hoarse. In some cases a slight trembling is perceived, which, according to M. Eckel, never terminates in convulsions, but in a sort of apparent sleep, during which the dogs never cease biting any object presented to them. The desire to bite subsists after the access of furor has subsided.

" On the second day the paroxysms are at greater intervals, less frequent, and of shorter duration. During the intervals, the dog remains in a recumbent posture: if he attempts to get up, the posterior extremities seem weak and vacillating—the inferior maxilla drops, and his mouth is half open—drowsiness predominates—the animal expresses no longer a desire for water—he lies quietly with his head on his belly—the sonorous metallic bark is no

longer heard, but instead of it a short, hoarse howl is from time to time audible—the external objects which excited him before lose their effect; and it is with difficulty that the animal is made to rise. In ordinary cases this general debility passes, at the third, or, at the latest, the fourth day, into a complete state of paralysis. Then the animal is constantly lying on one side —the head and legs are extended—the mouth and eyes half open, the latter are fixed, the pupil immobile and dilated, the cornea dusky and shrunk. Sometimes a fetid diarrhœa exits, the alvine excretion being of a grayish or blackish colour, and voided involuntarily. The respiration now becomes imperceptible, and in general the animal dies quietly, and without a struggle."

On the pathology of the disease it cannot be said that much light has been thrown by M. Eckel's researches; but it is evident, from the following remarks, that he entertains the opinion of its intimate connexion with the venereal manifestation. Speaking of the peculiarities of the canine species, he observes:

"The physiological characters of the dog, which influence more particularly the generation of rabies, and which are to be sought for in the vegetative, sensitive, and irritable phases of his nature—the fact of his immoderate venereal desires, and his extraordinary fecundity—his quick growth, and the speedy development of his faculties—his appetite, and necessity for animal food, putrefied in most instances—his rapid digestion, and continual voracity —his excretions, so repulsive in their odour—the faculty of bolting his food, with an equal facility of vomiting it up again—the rapid renewal of the blood —the acceleration of the respiration and circulation—the development of the brain—the large amount of instinct—the activity of the intellectual faculties —the facility of impression—its natural pugnacity and passion; on the one side, an unlimited attachment; on the other, an implacable hatred, of which no other animal seems to be capable—his temperament; in youth sanguineous, in old age melancholic; all this indicates a peculiar predisposition to the diseases of which rabies seems to be the type, *par excellence*. Add to this, the many changes to which domestication subjects the dog. If one considers the ill-treatment he often receives, being sometimes nearly starved to death, at others fed to excess; often exposed to the intensity of heat and of cold; sometimes allowed an immoderate indulgence of the venereal desires, at others prevented at the very moment of satisfying the same; and if we reflect for a moment on the effects produced on the morals of some degraded beings of the human species by venereal desires, we may easily understand the results that follow their restraint, and also the entire prevention of satisfying them. In the dog, where the ejaculation of the semen is to follow so closely upon its secretion, he not being, like man and other animals, provided with a vesiculæ seminales, it will not be difficult to comprehend how a nervous irritation, with a sanguineous decomposition, and finally rabies and death, should become developed in him.

"So long as the specific cause of the pathological nature of rabies remains undetermined, it would be impossible, *à priori*, to decide on any curative method so as with certainty to combat the disease. Much here must be left to chance. Confining ourselves to the careful observation of the malady, allowing every liberty and every latitude to animals in order to admit of a full manifestation of their instinct, is the only way by which we may one day hope to arrive at an efficacious therapeutic treatment of rabies."

11. *Treatment of Hydrophobia by Chloroform.*—Two cases are recorded in which the inhalation of chloroform has been employed in the treatment of hydrophobia. The first case is reported by Dr. Smiley,* and was that of a

* Philadelphia Med. Exam. April 1848.

boy, æt. 14, who was bitten by a dog known to be rabid, nine weeks previously. The symptoms were greatly relieved, but the child died unexpectedly. The second case, narrated by Mr. Ackerby, had a fortunate termination. The patient had been bitten *eleven years* previously by a rabid cat. The symptoms were irritability of temper, spasm about the throat, dribbling of viscid saliva, delirium, &c.*—[The length of time which had elapsed since the alleged inoculation, renders the hydrophobic characters of the case somewhat doubtful.]

PART II.—SPECIAL PATHOLOGY.

§ I.—*Diseases of the Nervous System.*

12. *The relation of Cerebral Congestion to Apoplexy and Ramollissement.*—In a memoir presented to the Académie de Médecine, M. Durand Fardel urges the important part which congestion assumes in the pathology of apoplexy and cerebral softening. Contrary to the opinion of Rostan, he regards the latter as invariably induced by congestion, and never by a degeneration analogous to senile gangrene. The same importance is attached to congestion, as a condition premonitory of apoplectic effusion. In the ensuing discussion, M. Rochoux repeated a previously expressed opinion, that in the majority of cases of apoplexy there are no premonitory symptoms indicating vascular fullness, but that a certain particular change takes place independent of congestion; the consequence of which is disruption of the capillary vessels. (See 'Abstract,' Vol. I, p. 127.)*

13. *Delirium of Fever, Tartar Emetic and Opium in.*—The practice recommended by Dr. Graves, of treating the cerebral excitement of fever by tartar emetic and opium, is highly approved of by Mr. Todd, in an interesting communication on the state of the brain in fever.†

14. *Tubercular Disease of the Brain.*—A very instructive case of this disease, exhibiting the insidiousness with which its approaches are marked, is published by Mr. Salter, of Poole.‡ The subject was a young lady, æt. 12, who, for two months previously, had been complaining of loss of appetite, and headache, with other symptoms which might fairly have been attributed to simply deranged primæ viæ. She had at the same time severe lameness, with tenderness of one foot. Attention was paid to the regulation of the secretions without much benefit, when, March 26, vomiting was noticed for the first time. The headache became more severe, and the head hot. Leeches were applied, which, for the time, removed the headache. After about six weeks' change of air she was found in some respects improved, but the vomiting still continued, accompanied by "whizzing" in the head. The vomiting occurred generally on first rising to dress, but occasionally also during the day. The matter brought up resembled bile. At this time her appetite was good, bowels regular, pulse 80, pupils and sight natural, but emaciation continued.

July 1. The following report was made: The patient free from pain, expression languid, eyes clear, pupil large, but amenable to light. No local or general signs of pectoral disease; not any functional derangement beside *vomit-*

* Lancet, July 29, 1848. † Bulletin de l'Académie, and Brit. and For. Med. Chir. Rev. Oct. p. 541. ‡ Lancet, June 10. § Guy's Hospital Reports, Oct. 1848.

ing, which occurs about twice in the twenty-four hours. The time at which it occurs is most uniformly on changing her position in bed.

August 12. The obscurity hitherto surrounding the case at this time was removed. The occurrence of blindness, with complete amaurosis, clearly indicated organic lesion of the brain. It is curious that the vomiting now subsided, but her debility increased.

This case need not be minutely followed further; suffice to say, that the sickness returned, and the general debility increased to an alarming extent. The power of deglutition also became gradually impaired; and, toward the close, asthenic bronchitis declared itself.

After death, the lesions discovered in the thoracic and abdominal organs were not prominent, consisting of traces of pleuritis, with tubercles in the liver and lungs. The chief morbid appearances were confined to the brain, in which a large tubercular mass was found to occupy the posterior lobe of the right hemisphere, dipping deeply into its substance. The medullary portion of the brain was soft and pulpy, the posterior cornua were enlarged to the size of a pullet's egg. The corpora striata were lighter in colour than usual; and from the anterior part of the left a fleshy-looking substance, like that of the carneæ columnæ of the heart, stretched across to become attached to the septum lucidum. The optic thalami were mottled with red and gray. The left lobe of the cerebellum was also disorganized by tubercular matter; and in the situation of the corpus dentatum was a cavity the size of a walnut, and containing a mixture of pus and broken-down cerebral matter. The surface of this cavity was lined with a smooth vascular membrane, having projecting from it numerous hard tubercular masses of various sizes.

In remarking upon the circumstances attending this case, the author acknowledges the difficulty of determining the priority of morbid actions, but seems to consider the cerebral affection and disease of the foot to have been coeval; the disturbance of the chylopoietic organs may have been antecedent, or merely sympathetic. [We should be disposed, with him, to adopt the latter view; for as this disturbance only commenced a few months prior to death, it will be difficult to imagine that the disease found in the brain could have originated subsequently, and yet have attained so extensive a development in so short a time. It is unquestionable in our minds that the tubercular disease in the brain had long existed, and that the occurrence of functional disturbance of the digestive apparatus marked the period at which the inflammatory action and softening of the brain commenced; the results of which were the immediate cause of death.]

15. *Fungus Hæmatodes of the Brain.*—Mr. Prankerd narrates a case in which one hemisphere of the brain was almost entirely destroyed by a malignant growth, and yet the patient lived for many years with the intellectual faculties unimpaired. The case he remarks offers some points of interest in connexion with the theory of the duality of the mind advanced by the late Dr. Wigan.

The patient, a female, æt. 44, for the last ten years of her life had suffered from intense pain in the head occurring at intervals, and was for nearly the whole period completely blind. The treatment adopted afforded only temporary relief, and she sunk from exhaustion. Throughout the whole period her mental powers were unimpaired.

On examination, the right hemisphere was found to be healthy, the left softened, and the anterior and inferior portion was occupied by a firm tumour, weighing upwards of eight ounces, and having the structure and appearance of fungus hæmatodes.*

* Prov. Med. and Surg. Journal, Sept. 20, 1848.

16. *Hydatids of the Brain.*—In communicating to the Royal Medico-Chirurgical Society the details of a case reported by Dr. Stewart, Dr. Gregory remarked on the greater rarity of acephalocysts, or hydatids, in the intra-cranial structures, than in the thoracic or abdominal tissues, and referred to Dr. Craigie's observation that in the greater number of recorded cases only solitary serous cysts existed, not clustered hydatids. After noticing briefly three cases, one described by Rendtorff, a second related by Mr. Mowatt, of Worthing, in the second volume of the 'Medico-Chirurgical Transactions,' and the third communicated by Mr. Burnell to the late Dr. Baillie, who remarked that none such had ever fallen under his own observation, Dr. Gregory states, as the result of his reading, that the normal series of symptoms flowing from the development of intra-cranial hydatids seem to be the following:—Pain in the head, succeeded, after a considerable time, by epileptic fits, and terminating in apoplexy. The Pathological Museum of the Army Medical Department at Fort Pitt, Chatham, contains two specimens of hydatids of the brain. An account of all that is known relative to these cases has been furnished to Dr. Gregory by Dr. French. In the first case, no cerebral symptoms were noticed during life. After death, cysts, described as hydatids, were found beneath the pia mater, covering the hemispheres, in the right corpus striatum, and in the substance of the cerebrum in its immediate vicinity. In the second case, epileptic fits were present for three years and five months before death. Here were found small round bodies, like hydatids, some hard and almost cartilaginous, not only beneath the pia mater, but also generally throughout the substance of both the cerebrum and cerebellum. They were collected to the amount of an ounce or more. Each consisted of a distinct membranous sac, which sometimes appeared double, and in layers like an onion. All the cysts contained a clear fluid, with more or less cheesy-looking matter. Dr. Gregory then communicated the following case, which, at his request, had been transmitted to him by Dr. Stewart. The patient, a gunner of the Royal Artillery, æt. 24 years and 9 months, was admitted into the Artillery Hospital, Woolwich, on the 29th April, 1848, immediately on his arrival from Malta, with the following history:—He had arrived in Malta with his company in February 1847, and from that time suffered from constant headache. In November 1847, he had a severe epileptic fit, followed by coma. Subsequently imbecility showed itself, and vision became impaired, the pupils sluggish, and the left eyelid became affected with slight ptosis. His memory became defective, and he became subject to fits of uncontrollable laughter. His hearing was but little affected, but both eyes were amaurotic. He died after a succession of epileptic fits, ending in coma. After death there was found on the middle fossa of the base of the cranium, between the dura mater and the cranial bones, a mass the size of the closed fist, which proved to be a collection of hydatids. They were numerous, and varied in size from a pea to an orange. The substance of the brain was compressed, but otherwise normal.*

17. *Tetanus.*—Dr. Wilmot, who has recently published on this disease, states his belief that its division into acute and chronic is perfectly justified by the results of observation, and that such a division is necessary, in reference both to prognosis and treatment. Idiopathic tetanus, he observes, has generally a favorable issue, while the reverse is generally the case in the traumatic form. He regards a peculiar expression of countenance as a very characteristic sign of the impending malady, and more to be trusted to than difficulty of swallowing.

In reference to the pathology of the disease, the author thinks that it is

* Reported in various journals.

proved not to be dependent upon hyperæmia, or effusion on the cord, by the fact that in post-mortem examinations such appearances are as often absent as present; and, on the other hand, that in cases of ascertained spinal meningitis, as in those described by Dr. Mayne and others, the peculiar symptoms of tetanus are not present.

[In this our author is mistaken. Dr. Darby, in describing an epidemic of spinal meningitis (Abstract, Vol. III, p. 175), as also Dr. Hicks (Abstract, Vol. VI, p. 221), distinctly refer to tetanic symptoms as prominent phenomena.]

Dr. Wilson is on these grounds inclined to refer the disease to augmented excitability of the true spinal system, of a purely functional character, and makes known in the following propositions, with which the memoir concludes.

1st. That tetanus depends on irritation, direct or indirect, of the excito-motory system, by which it becomes surcharged with motor influence, and that inflammation in or about the cord, or any appreciable lesion, is not an essential condition of the development of the disease.

2d. That while we have ample evidence, physiological and practical, that opium is ill calculated to fulfil the indication in tetanus, namely, to diminish the excitability of the true spinal cord, until our views become improved, and the knowledge of our anti-tetanic agent ceases to be a desideratum, we are not justified in altogether discarding the use of the drug.

3d. That our grand object in the treatment of tetanus should be to support the patient's strength, with a view to compensate the vital powers for their great exhaustion, consequent upon the expenditure of force in the violent muscular contractions.

4th. That as the removal of the exciting cause, once that the first evidence of irritation propagated to the spinal cord becomes manifest, does not, in the least degree, check the progress of tetanus, or abate the violence of its symptoms, all operations in traumatic cases are not only unnecessary but injurious.*

18. *Trismus nascentium.*—It will be recollected that Dr. Sims published a paper on *trismus nascentium* (See Half-Yearly Abstract, Vol. IV, p. 334), in which he maintained that the disease was caused by *displacement of the os occipitis*, whereby compression was made upon the cerebellum, medulla oblongata, and the important nerves originating from it. This displacement, he believed, proceeded from the careless habit of suffering young infants to lie too much upon their backs, and he suggested the simple remedy of placing them on their sides, and letting them rest upon soft leather pillows. Since that time, Dr. Sims has closely studied the subject, and although he has discovered the fallacy of some of the views he then entertained, still he is satisfied that *the leading idea* is correct, and the object of this paper is to substantiate it, which he does by numerous carefully observed facts, and most plausible deductions. One of the errors which Dr. Sims says he once entertained was, that the displacement was attributable to *imperfect* ossification of the occipital bone; whereas he is now convinced that it is more likely to occur where ossification is *unusually advanced.* He says that, in intra-uterine life, or before parturition, the os occipitis lies *beneath* the parietal bones, but immediately after birth the occiput should bulge out, and its superior edge rest *upon* the border of the parietal bones. Unless this takes place, a more or less dangerous compression upon the soft parts mentioned will soon be produced. In most cases, if the proper position of the infant be attended to, nature will correct the evil; but it occasionally happens that surgical aid will be required

* Dublin Quarterly Journal of Medical Science, Aug. 1848.

to liberate the confined and misplaced bone. Dr. Sims has elevated the depressed occiput with an instrument something like an awl, upon one or two occasions, with success. He gave the details of some exceedingly interesting cases which he had saved by his method of treatment, and which strongly corroborate the views he entertains. Cases of *trismus* present different degrees of severity, some terminating fatally in a few hours, and others continuing for several weeks; but under all its varied forms, Dr. Sims thinks he has discovered one invariable diagnostic symptom, viz. *the inability to suck the breast.* This symptom he has *never seen wanting in a single case*, and it has often served to determine the existence of the disease, where the other symptoms left room for much doubt as to the true nature of the case.

A more extended experience has convinced Dr. Sims that the disease does not arise exclusively from a depression of the occiput; he has seen cases where it arose from a depression of *the parietal bones.* The position of the child in this case should be different from the preceding. It is astonishing how promptly, according to Dr. Sims, relief is afforded in many cases, simply by placing the child in the proper position. He has seen evident improvement in half an hour or less, and complete relief afforded in the course of a few hours. He says that nothing is necessary in cases of occipital depression, but to place the child upon its side, so that the head may rest fairly on the temporal bone. Not *partially inclined*, so that the weight of the head will rest on the parietal protuberance, as is too often done by mothers and others, who will assert that the child has been *constantly laid upon its side, but flat upon the side of the head*, when there will naturally be a slight inclination downwards and forwards. The pillow should be of soft feathers, and beaten up so as to be thickest in the middle. In cases of parietal depression, the child should be kept almost erect on the back, or held over on the forehead. Dr. Sims recommends no medicine in the treatment of the complaint. All the distressing symptoms, such as insomnia, borborygmi, griping diarrhœa, tonic spasms, &c., disappear as the brain, is relieved. He thinks that all the recoveries from this usually fatal disease have been entirely *accidental*— in the management of them the child *happened* to be placed in the right position, to allow nature to rectify the evil. He is convinced of this in regard to the recommendation of Dr. Eberle, to apply *a blister to the nucha*, for then the child must necessarily be placed on the side. And as to a successful case mentioned by Dr. Stone, in his lecture to the medical class, which followed the application of sweet oil all over the body, at the request of an old woman, he is equally convinced that the good effect is more fairly attributable to the change of position accidentally made, than to any virtue of the oil. Dr. Sims spoke of certain infantile affections, which he calls *trismoid*, because they resemble true *trismus nascentium* in many particulars, but lack the grand diagnostic symptom, the total inability to suck the breast.

As to the reputed frequency of the disease in southern countries, Dr. Sims contends that we are in want of further and more careful observations, as well to settle *the existence of the fact*, as the *malign influence* of the climate. He thinks it will be found, on careful investigation, that its frequency depends more on the improper management of children, than on the climate or anything else. By reference to Curling on Tetanus, the best work extant on the subject, it will be seen that the disease has prevailed to a great extent among children in *a northern latitude.* As to the frequent occurrence of the disease in certain localities, on particular plantations in the South, for instance, Dr. Sims thinks that more careful observation is demanded. He knows of two large plantations in the same neighbourhood, on one of which the disease is very common, insomuch that, within the last ten years, *fifty* negro children

have been lost from it; whilst on the other it is *equally rare*. He is satisfied that, in these instances, the different results depend on the different degree of care and attention paid by the owners to their negro children. He is inclined to think, however, that it is far more common at the North than is generally admitted. He believes that many of the deaths in early infancy, attributed so vaguely in their bills of mortality to *convulsions*, *spasms*, *infantile complaint*, &c. are really caused by the disease, under consideration. This paper, which is published in the 'American Journal of the Medical Sciences,' is deserving of the special attention of the profession.

19. *Paralysis from Arsenic.*—Two cases have been lately recorded, in which the medicinal use of arsenic was followed by paralysis. In Dr. Hasting's case, the patient had taken Fowler's solution in only three-minim doses for seven weeks.*

20. *Paralysis, with Atrophy of Muscles.*—It is a fact well established, that the nutrition of muscle is steadily proportionate to the energy and regularity of its action, and that as, on the one hand, a continued action may lead to exaggerated muscular development, so, on the other hand, disease leads to wasting of the muscular fibre. Atrophy of muscle is, therefore, seen to be a general concomitant of paralysis, and may in itself, in certain cases, materially interfere with the restoration of power, even although the abstracted or diminished nervous influence be regained. Mr. Barlow, in a recent paper published in the 'Medical Gazette,' has taken advantage of the effect of action upon muscle, to propose that, where voluntary power is lost, involuntary or excited motion should, where it is possible, be encouraged and maintained, for the purpose of preventing the wasting of the limb, believing that action of a muscle, of whatever kind, as is shown by Mr. Paget, is, in a degree, conducive to its nutrition. With these views he proposes that galvanism should be systematically employed, as well as other means of producing excito-motory movements. He very properly remarks, that as, for instance, in the paralysis of dentition, a certain amount of voluntary power is often recovered, but it is often too late to be of material service to the patient, as in the meantime, from the want of action of the muscles, nutrition has remained in abeyance, and the whole limb has become atrophied and shortened. In such cases, if it were possible to prevent the atrophy by the induction of excited muscular action, he considers that this wasting might be prevented, and the restoration of voluntary power, when so fortunate a result occurred, would find the limb in a condition, as to length and symmetry, such as to be rendered serviceable.†

21. *Neuralgia.*—Dr. Ruhbaum, of Potsdam, bears testimony to the occasional benefit to be derived from the use of Indian hemp in facial neuralgia. The dose was equivalent to a grain of the resinous extract.‡

22. *Peculiar Affection of the Portio Dura.*—Dr. Graves describes a remarkable affection, previously unnoticed, of the portio dura, which exhibited itself in the production of spasmodic twitchings of all the muscles supplied by that nerve. The case is that of a female, æt. 40. The complaint commenced by spasms of the lower eyelid of the right side, producing a kind of winking, and the other muscles gradually took on the same action. The disease was unpreceded by pain in the head or ear. General health good. On admission, all the muscles of the face supplied by the seventh nerve were affected with spasmodic contractions, occurring many times in a minute. The angle of the mouth and ala nasi of the right side were pulled towards the ear. The

* Prov. Med. and Surg. Journal, Aug. 23, 1848. † Medical Gazette, Sept. 29, 1848.
‡ Medicinische Zeitung, in Lancet.

platysma participated in the spasms, which, moreover, continued during sleep. There was constant noise in the right ear, but there was no pain, or loss of hearing.*

[We have recently met with a precisely similar case, also in a female, æt. 60. In her the spasm returned at intervals of half a minute or minute, for several minutes together, and were accompanied by lachrymation, but without pain. The movements were so great that she was obliged to steady the cheek with her hands.]

§ II.—*Diseases of the Respiratory System.*

23. *Movements of Respiration in Health and Disease.*—The elaborate essays by Mr. Sibson on the position of the internal organs, to which we alluded in our last Report, have been followed by an equally talented exposition of the movements of respiration in health and disease; for the measurement of which he has, moreover, devised a very ingenious instrument. In the healthy state, during tranquil inspiration, he states that the costal advance is from 0·2 to 0·7 of an inch, and the abdominal 0·30; and during a deep inspiration the costal advance is from three-quarters to two inches, and the abdominal from three quarters to one inch and a half. The increased motion of deep abdominal inspiration may be well observed in the recumbent posture.

In studying the modifications of the respiratory movements, Mr. Sibson first speaks of those which take place during a healthy state of the internal organs. The causes of the disturbance in such conditions comprise spinal distortion, injury or disease of the ribs, intercostal muscles, and contiguous parts which restrain the costal motion, peritonitis, and abdominal distension, which may interfere with the descent of the diaphragm. In a subsequent part of his paper, the author considers the effects of disease on the respiratory organs themselves as follows:

"If there be extreme obstruction to inspiration in the larynx, the diaphragm descends with energy, lengthening the lungs, and as air cannot enter these organs readily, they collapse, and the costal walls fall back during inspiration, owing to atmospheric pressure. In emphysema and bronchitis, there is obstruction to respiration in the smaller bronchi; hence, in inspiration, while the diaphragm, descending, draws down and elongates the lungs, and the upper part of the chest draws them upwards, air not being able to enter freely, the lower part of the chest collapses. In pleuritic effusion, pleuritis, condensation of the lung, phthisis and pneumonia in certain stages—diseases which prevent the expansion of the whole or part of one lung, the movements of respiration are lessened, annihilated, or reversed over the affected part, and exaggerated everywhere else. If the upper lobe be affected, the five superior ribs—the thoracic set, are restrained; if the lower lobe, the sixth, seventh, and eighth ribs—the intermediate set, and sometimes the four lower ribs—the diaphragmatic, also are restrained. This division of the ribs, proposed by the author, on physiological grounds, in a paper on the Mechanism of Respiration, in the 'Philosophical Transactions,' he retains throughout the present paper on pathological grounds. The last section relates to the influence of affections of the head on the respiratory movements. The rhythm of respiration is an important diagnostic sign. Inspiration and expiration are equal in health, though expiration is often prolonged. In laryngitis, emphysema, and sometimes in phthisis, the expiration is prolonged, owing to obstruction. In laryngitis, the expiration is equally slow throughout; in emphysema, it is quick at first, when the bronchi are largest; then slow, and gradually slower

* Op. cit. 571.

towards the end, where the tubes are smallest and the obstruction greatest. The expiration is lengthened in proportion to the obstruction in the bronchi. The author concludes by referring to the diagnostic value of the signs in question, endeavouring neither to over- nor to under-estimate them.

" Mr. Sibson showed the application of the chest-measurer—an instrument which measures the diameter and the respiratory movements of any part of the body. In carrying out the inquiry into the morbid respiratory movements, Mr. Sibson retained the division of the ribs into three sets—the thoracic, diaphragmatic, and intermediate, proposed by him in a previous paper on the Mechanism of Respiration, on physiological, and confirmed on pathological grounds. The five superior ribs—the thoracic set—embrace and expand the upper lobes; if the expansion of either upper lobe be imperfect or impossible, owing to disease, as phthisical cavities or consolidation, the motion of the thoracic ribs over the seat of disease is restrained, annihilated, or reversed. But it is not only in disease of the lung that they are restrained in motion—lateral curvature, injuries to the ribs, local pleurodynia, disease in the axilla, shoulder, or surrounding tissues, anything that induces the movements of the ribs to cause pain or mischief, may diminish or arrest their motion. As the right middle lobe is behind the third, fourth, and fifth costal cartilages on the right side, and the heart behind those on the left, affections of the middle lobe will restrain the motion of the right cartilages and ribs—pericarditis. Pericardial adhesions and heart disease will restrain the left. The ninth, tenth, eleventh, and twelfth ribs form the diaphragmatic set, which protect the liver, spleen, and stomach, and which expand when the diaphragm descends, then dilating and embracing the inferior part of the lower lobes. In health, the motion of these ribs, during tranquil, involuntary inspiration, is greater than that of the thoracic ribs. This is owing to the great descent of the diaphragm. The abdomen, in man, moves forward during a tranquil inspiration nearly the third of an inch. The diaphragmatic ribs move outwards the tenth of an inch, while the thoracic ribs advance only from two to seven hundreths of an inch. This might be expected, from their action being supplementary to that of the diaphragm. The motion of these ribs is arrested as in peritonitis, when that of the diaphragm is so also; it is proportionally restrained when that of the diaphragm is so, in abdominal distension, and other such cases, at the same time that the motion of the thoracic ribs is proportionally exaggerated. The diaphragmatic ribs and diaphragm, on the affected side, may be likewise restrained by pleuritis or pneumonia of the inferior part of the lower lobe. The sixth, seventh, and eighth ribs, which have a conjoint cartilage from the intermediate set, partially diaphragmatic, protecting the liver and stomach, and partially thoracic, embracing and expanding the lower lobes. Their inspiratory movement may be restrained by pneumonia, pleuritis, and condensation of the lower lobe, and by pleuritic effusion; that of the sixth rib, by disease either of the lower portion of the upper lobe, or the upper portion of the lower lobe. The different sets of ribs are each restrained by the affection of a different part of the chest or abdomen: the thoracic set, by affections of the upper lobe; the intermediate set, by those of the lower lobe; and the diaphragmatic set, and the diaphragm, by those of the lower part of the lower lobe and the abdomen. In condensation of the whole of one lung, or extensive effusion into either pleura, the expansion of the whole of the ribs, and the descent of the diaphragm on the affected side, are restrained, while on the opposite side they are exaggerated. This division of the ribs into sets is practical, and based upon their respective functions, and does not differ materially from the anatomical divisions in use. When inspiration is obstructed, either in the outer passages or smaller bronchi,

the respiratory movements present an important and readily recognised class of signs. If the larynx be almost closed, the lungs can scarcely expand during inspiration; the diaphragm, descending with power, draws down and elongates the lung; as the air cannot rush in sufficiently, the lung collapses, and the walls of the chest are flattened and narrowed during inspiration, being forced inwards by the pressure of the atmosphere. This is well illustrated by an observation made by Professor Sharpey, which any one may repeat. Pass a tape round the chest, close the glottis, and make the diaphragm descend as in inspiration. The abdomen will protrude considerably, and the chest be narrowed from half an inch to an inch. I have observed the same thing in hiccough. Whenever there is great obstruction in the outer passages, the chest, especially at the lower end of the sternum, collapses during inspiration. When there is obstruction to inspiration in the smaller bronchi, either from narrowing of them, as in emphysema, or from their being plugged with fluid, as in bronchitis, the superior thoracic ribs expand with force, and the diaphragm descends rapidly, and as sufficient air cannot enter, the lower end of the sternum and the adjoining cartilages recede during inspiration. But it is not only in such cases that the lower end of the sternum falls back during inspiration. When much fluid is effused into either pleura, if the diaphragm descend during inspiration, the sac containing the fluid is elongated, and the lower end of the sternum and the adjoining cartilages over the affected side may fall in. The sternum may also fall in when there is extensive pericardial effusion, if the diaphragm descends, elongating the sac. If the heart be large and universally adherent, the descent of the diaphragm draws down the heart; and as the expanding lung cannot pass between the heart and the ribs, the sternum often recedes during inspiration. If the heart be simply enlarged, the lungs intervene between the heart and the ribs, and though the movement of the lower end of the sternum and the adjoining left cartilages are restrained, yet they seldom recede. We are thus sometimes furnished with a sign to distinguish enlargement of the heart, when with or without adhesions. It is well to remember that the normal movements of the left ribs, all but the superior thoracic and the diaphragm, are somewhat less than those of the right side. He then remarked on the recognised value of the altered rhythm of respiration as a sign of chest disease. In laryngitis, bronchitis, and emphysema, the expiration is longer than the inspiration, in proportion to the obstruction to respiration. In laryngitis, the expiration is prolonged, owing to their being then in contact; while in inspiration they are drawn asunder, and it is equally slow throughout, owing to the obstruction being equally great throughout. In emphysema and bronchitis, the obstruction being in the smaller bronchi is greatest at the beginning of inspiration and the end of expiration. When the chest expands, the bronchi, as well as the air-cells, necessarily dilate; the tubes are therefore larger at the end of inspiration and beginning of expiration. If the obstruction be from fluid, the fluid fills up the tubes most completely towards the end of expiration; it is then that the rhonchi are most frequently present, and most sharp, that expiration is most difficult. In inspiration the obstruction diminishes, in expiration it increases during the acts. In emphysema and bronchitis the expiration is quick at first, then slow, and becomes gradually slower towards the end. In phthisis the expiration is prolonged in like manner, when there is similar obstruction in the air-tubes or cavities. Only in peritonitis had he observed the expiration to be shorter than the inspiration, owing, he conceives, to the resistance offered to inspiration by the constant rigidity of the abdominal muscles. The existence of the signs indicated in this sketch cannot, of course, be conclusive as to the diagnosis of any disease; but their observation draws one's attention

to the seat, and often informs one as to the nature of the disease. The disturbed rhythm and the reversed respiratory movements are particularly of value as indications of the presence of chest disease."*

24. *Opening of the Ranine Veins in Angina.*—M. Ceglie has derived much advantage from this mode of bleeding in diseases of the throat. He explains the success by reference to the anatomical distribution of the blood-vessels. He has seen it afford great relief in the acute stages of inflammatory croup, the symptoms of oppression, the agitation, suffocative cough, &c., ceasing almost instantaneously.

To perform the operation, the tongue is drawn forward, and after puncturing the veins, the mouth is frequently gargled with warm water. The bleeding may be repeated three or four times in twenty-four hours.†

25. *Spasm of the Glottis in the Adult.*—Dr. Walker, of Teignmouth, adduces a case in support of Dr. Wardell, in the controversy respecting the occurrence of spasm of the glottis in the adult. (Abstract, Vol. VII, p. 38.) The patient was, as is generally the case, a female, and when seen was labouring for breath, which she drew at long intervals, with a loud crowing inspiration, livid countenance, cold extremities, &c. The spasmodic condition varied in intensity, and was quickly relieved by antispasmodic remedies.‡

26. *Pneumonia.*—Dr. Hughes has published the results of fifty-four cadaveric inspections of cases of pneumonia, the analysis of which gives some results worthy of notice. He finds that the *age* most prone to the disease is between 20 and 30, which he thinks probably arises from the fact of a larger proportion of adults being alive between those years than any other decennial period. Of the *sexes*, the male afforded the most, but not so much so as to render it improbable that the female would not be equally liable to the disease, if exposed to its causes in the same degree.

Respecting the lung most frequently affected, Dr. Hughes finds that the preponderance is considerably on the side of the right lung, but it is strange that, in the fatal cases, the two lungs were equally affected. As might be expected, both lungs were found to be simultaneously affected, oftener than one separately. As to the part of the lung most commonly affected, Dr. Hughes's observations confirm the general opinion that the base is the part most frequently diseased, especially in the primary form. Among his cases are found a large proportion of instances of gangrene.§

—A case of pneumonia has recently occurred in our practice, and elsewhere reported, which is worthy of notice, from the fact that perfect resolution took place without the reappearance of "crepitus." The occasional occurrence of such instances is noticed by Graves, Stokes, &c., but that they are rare may be surmised from the fact that few of the systematic writers on medicine, even of recent date, have alluded to it.‖

27. *Phthisis, Œdema in.*—Towards the close of this, as well as other exhausting diseases, it is not unusual to find one of the limbs, and sometimes both, infiltrated with fluid. This is generally attributed to debility; but in some instances in which the cause has been specially sought for, it has been shown by Piedagnel and Dr. Lewis to depend upon partial obliteration of the iliac vein, usually the left. The former explains the occurrence of the coagulation of the blood, upon the supposition that the wasting of phthisis causes the vein to be brought into more direct contact with the vertebral column

* Reported in Lancet, June 3. † Gazetta Toscana della Scienze, and Prov. Journal, Aug. 9. ‡ Prov. Med. and Surg. Journal, July 26, 1848. § Guy's Hospital Reports, Oct. 1848. ‖ Prov. Med. and Surg. Journal, May 17.

against which it is compressed by the corresponding artery. In connexion with the subject, we would call the reader's attention to an essay by M. Bouchat on the spontaneous coagulation of the blood in cachectic diseases (Abstract, Vol. II, p. 195), as being a more plausible explanation of the phenomenon in question.*

§ IV.—*Diseases of the Circulatory System.*

28. *Spasm of the Heart.*—The verdict delivered by the jury in the case of the sudden death of Lord George Bentinck has given rise to the insinuation, on the part of an influential cotemporary, that "spasm of the heart" is a creation of the imagination, or is at least a condition which is not understood. He admits that the heart's contractions may be influenced by causes both mental and physical, and that in other involuntary muscles, as in the intestines, spasm is no unusual occurrence, but he doubts if spasm of the heart can occur in a healthy state of the organ. In this we entirely differ from him. There is no necessity for pointing out the *à priori* probability that the muscular tissue of the heart can be affected by spasm, as there is nothing in its ultimate constitution different from other involuntary muscular fibre, as it exists in the coats of the intestines, &c.; all we have to ascertain in reference to the justification of the verdict alluded to is, that there are circumstances the operation of which is capable of inducing spasm of the organ in question. It is not difficult to comprehend that many such causes do exist, the influence of which may be either direct or reflected. Among the direct, we would name sudden acceleration of the circulation, or the direct application of the blood charged, *pro tempore*, with some irritating ingredient; the indirect or reflected would be more numerous, consisting of irritation of various kinds, physical as well as emotional, reflected through the spinal marrow upon the cardiac plexus. To take one of these—if mental emotion of a given degree may cause palpitation, why should not a deeper emotion produce a tonic contraction of such duration as shall destroy life? Is not this the explanation of some cases at least of sudden death from mental shock? The explanation is at least as feasible as that which assumes a paralysis of the cardiac muscle.

But it may be further stated, that although the Editor of the Journal referred to and some of his correspondents refuse to admit the possibility of spasm of the healthy heart, such a pathological condition is fully recognised by two of the best authorities on the subject of heart disease of the present day, viz. Dr. Williams and Dr. Latham.

In his 'Principles of Medicine,' p. 374, the former thus writes: "Death by cardiac syncope, or sudden cessation of the heart's action, may occur in two ways: 1st, by the muscle losing its irritability, so that it ceases to contract; and, 2dly, by its being affected by tonic spasm, in which it remains rigidly contracted, losing its usual alternation or relaxation. In both these cases death is quite sudden, the patient expiring with one gasp. In the first case, both sides of the heart are found after death distended with blood, and if the examination were made after death, the blood in the left cavities would be found to be fluid. In the second case, the heart appears small, and very hard; the ventricles are found so firmly contracted, that the cavity is almost obliterated, and contains no blood; the muscle is very firm, but after maceration in water, the walls of the ventricles yield to the pressure of the fingers, and the cavities may be restored to their natural dimensions."

But Dr. Latham is still more explicit. After alluding to Heberden's descrip-

* Philadelphia Examiner, May 1848.

tion of angina pectoris, and showing that he distinctly referred the disease to "spasm" (distentio), he proceeds as follows:

"But the heart is a muscle, and its functions flow from its attributes as a muscle. Now we are in search of something in the heart which, as the concomitant of pain, may be disabling to its natural functions, and capable, according to its degree, of abolishing them altogether. This we find in *spasm*."

In a further page, he adds remarks on certain mysterious cases of sudden death analogous to Lord George Bentinck's, and clearly enunciates his belief that such are to be attributed to a first and fatal attack of angina pectoris—spasm of the heart.*

29. *Statistics of Valvular Disease.*—Dr. Whyte Barclay has examined the Museum of St. George's Hospital, in reference to the statistical history of heart disease, and has made the preparation the basis of an elaborate paper, read before the Medico-Chirurgical Society. In this the author exhibits the following facts with regard to seventy-nine cases:—The condition of the valves, aortic and mitral; the age and sex of the patient; the existence or absence of atheroma in the aorta; the previous existence or not of acute rheumatism; the state of the heart as to size, thickness of walls, &c.; the state of the pleura and pericardium, as to recent inflammation or old adhesions; the state of the kidneys; other disease found in the body; and the chief cause of death. The author institutes a minute comparison of the seventy-nine cases, with reference to these points; and remarks, in conclusion, that some of the deductions seem to him "worthy of attention, and demanding at least further investigation. The liability to double valvular disease (rather than disease of either the mitral or aortic valve separately) in consequence of rheumatic endocarditis, and the early incursion as well as the commonly early termination of that disease—the limit put by age in so marked a manner to fibrinous deposit on the valves of the heart—the very large proportion, amounting to almost one half, of the fatal cases of granular kidney found coincident with valvular disease, and its comparative rarity in those cases in which the kidney is large and mottled—are all facts clearly established with regard to these cases. To others must be left to determine whether they hold good in their more general application.

"One commonly received opinion these cases contradict, viz. that atheromatous disease affects by preference the mitral valve; and another is at least doubtful, viz. that it is in the advanced state of Bright's disease that endocarditis is liable to occur, unless we admit a form of endocardial inflammation without fibrinous deposit."

30. *Aneurism of the Aorta.*—Dr. Bellingham has continued his communications on cardiac pathology by the publication of an important series of cases, of which, however, we can only give the deductions drawn; these are to the following effect:

1st. That a double, not a single sound, characterises aneurism of the arch of the aorta, which closely resembles the double sound of the heart, and may be termed its *normal* sound.

2d. That the normal double sound of aneurism of the arch of the aorta has its cause in the friction between the blood and the lining membrane of the orifice and parietes of the sac, because there is no other agency to which it can be referred.

3d. That the normal second sound of aneurism of the arch of the aorta is caused by the regurgitation of the blood into the sac from the aorta and large vessels which arise from it.

* Lectures on the Heart, vol. ii, p. 386.

4th. That the first, or the second, or both aneurismal sounds, may be replaced by a murmur, which may have either a blowing, sawing, or filing character; and that such murmurs may be regarded as the *abnormal* sounds of aneurism of the arch of the aorta.

5th. That the first aneurismal sound is much more frequently superseded by a murmur than the second, because the force with which the blood is transmitted to the sac by the left ventricle is much greater than that with which it regurgitates into the sac at the period of the ventricular diastole.

6th. That the abnormal sounds of aneurism of the arch of the aorta, equally as its normal sounds, are caused by friction between the blood and the orifice or parietes of the sac; and that they are nothing more than exaggerated normal sounds—exaggerated, because the degree of friction is then increased.

7th. That in aneurism of the arch of the aorta pointing externally, the sound is not always double, but a double impulse is frequently also perceptible to the hand.

8th. That the second impulse of aneurism of the arch of the aorta has its cause in the same agency which gives rise to the second sound; consequently neither a double sound nor a double impulse are perceived in aneurism of the abdominal aorta, or of any of its branches.

9th. That the phenomenon known under the name of *frémissement cataire*, or purring tremor, whether it occurs in an aneurism or a large artery, is nothing more than the pulse of aortic regurgitation on a large scale; consequently that it is a sign of regurgitation into the ventricles of the heart, into an aneurismal sac, or into a large or a dilated artery.

10th. That the remarkable resemblance between the normal and abnormal sounds of aneurism of the arch of the aorta, and the normal and abnormal sounds of the heart, renders it probable that the mechanism of their production is the same.

11th. That the abnormal sounds of the heart, having their seat at the orifices of the ventricles, and being the result of increased friction between the blood and the parts through which it passes, are (like those of aneurism of the arch of the aorta) to be regarded as nothing more than exaggerated normal sounds.

12th. That the impulse of the healthy heart, like that of aneurism of the arch of the aorta pointing externally, is *double*, not single; and that in certain abnormal conditions of the heart, this second impulse becomes very distinct, when it has been termed "the back stroke of the heart," or "the diastolic impulse."

13th. That the second impulse of the heart (like that of aneurism of the arch of the aorta) is felt exactly at the period of the second sound; and both sound and impulse appear to be produced by the same agency.

14th. That as sounds almost precisely similar to those of the heart are developed in an aneurismal sac, which has neither muscular walls nor a valvular apparatus at its orifice, the latter do not appear to be as essential to the production of the normal sounds of the heart as most writers suppose.

15th. That the ordinary theory of the heart's sounds, which refers the normal sounds to one cause, and its abnormal sounds to a totally different cause, fails to explain several phenomena connected with the heart's action and sounds.

16th. That the theory of the mechanism of production of the heart's sounds, laid down in the preceding pages, satisfactorily explains every phenomenon connected with the normal and abnormal sounds of this organ.*

* Dublin Medical Press, June 28, 1848.

[Under the sections of Diseases of the Chylopoietic and Genito-Urinary Systems, we have so few subjects to notice, that we shall postpone them to our next Report.]

§ V.—*Diseases of Uncertain Seat.*

31. *Diabetes.*—In a clinical lecture delivered at King's College Hospital, Dr. Todd has given an account of some experiments which he performed to test the accuracy of Bouchardat's statement, "that, if all amylaceous ingredients were removed from the food, sugar would disappear from the urine." Two patients were placed in a separate ward, were locked in, and were only communicated with by the nurses, house-physician, and clinical clerks; and by this means they were prevented from getting any aliment which had been interdicted by the physician. During the whole of their sojourn in this ward, which was nearly two months, these patients were confined to a diet almost strictly of animal food, and for one period they only had that diet. From time to time they were weighed, the urine was analysed, and its specific gravity, &c. noted. This mode of treatment was highly beneficial, and the patients greatly improved; one of them, however, afterwards became affected with phthisis, and died. On examining the body of this patient, almost all the organs were found stuffed with miliary tubercles; the mucous membrane of the stomach was in an unnaturally vigorous condition; the liver contained less fat than usual, and the kidneys an abnormally large amount. In summing up, Dr. Todd comes to the following conclusions:—"1. The first of these is, the azotized dietetic plan of treatment is efficacious; that the patients were more benefited by it than by any other means; and that the admixture of a small quantity of vegetable food did not materially interfere with its favorable operation. 2. The evidence furnished by these cases is opposed to Bouchardat's theory, that the sugar is wholly derived from amylaceous food, and is little, if anything, short of a refutation of it. Take, for instance, one of the cases: when he was put into the solitary ward, he was deprived of all amylaceous food, and yet he still continued passing from two to three ounces of sugar daily. But it may be said that this was furnished by the greens which he then took; this, however, could not be the case, for they would hardly weigh as much as the sugar that was evacuated; but there was one period in which he did not even take greens; he took no vegetable food whatever, but lived entirely on meat, and that deprived of fat as much as possible. This period was from the 15th to the 24th of December; notwithstanding, however, this total exclusion of all vegetable matters from his diet for nine days, he evacuated in that time from twenty-five to thirty ounces of sugar, and his own bodily weight was all the while increasing. Whence, I would ask, could this sugar have been obtained? 3. The great increase of the power of the stomach is truly remarkable; these men found no difficulty in digesting four pounds of meat, besides several eggs, in one day—a task twice as great as any ordinary stomach could perform. The highly-developed condition of the mucous membrane of the stomach was, no doubt, associated with this exalted power of digestion, and probably exists in all these cases. 4. The fact that sugar could not be detected in the substance of the kidney goes to show that it is not there secreted, that it does not enter into any organic connexion with the elements of the kidney, but merely percolates in solution through it; hence the disease of the kidney must be secondary. The sugar, doubtless, reaches the kidney in solution in the blood, and there acts upon that organ as a diuretic, passing possibly dissolved in the water that filters through the

Malpighian bodies, and not being attracted from the blood through the walls of the tubes. 5. The comparative conditions of the epithelium of the liver and kidneys are very singular, and I am not aware that a similar observation has been previously made; it would tend to show with what avidity all carbonaceous matters, fat as well as sugar, are directed to the kidney in this disease. Most probably to some extent the fat of the liver goes, in common with fat from other parts of the body, to the formation of sugar; but this does not account for the deposition of fat in the epithelium of the kidneys. Lastly, these cases justify the conclusion that this disease is essentially one of the primary organs of digestion, whereby all substances readily convertible into sugar are quickly so converted; and that sugar is not digested, but passes into the blood unchanged, whence it is rapidly eliminated by the kidneys. We must not forget that this was, in fact, the view taken of this disease by Dr. Rollo, an English physician, who was the first to suggest the plan of treatment which all experience proves to be the most beneficial."*

32. *Gout.*—In connexion with Mr. White's observations on the cause of gout (see Art. 22), we may notice a communication, in which Mr. Pearl advocates the opinion that the principle of gout may be transmitted by contact, or near communication; in other words, that it is a contagious disease under certain circumstances. In support of this extraordinary opinion, he gives a few illustrations, of the value of which our readers may form their own opinion. He states that he had a most painful and protracted attack himself, in the spring of 1847, which lasted till near Midsummer; and that, during the sleepless nights that it occasioned, he thought of every possible cause that could have produced it. It was not hereditary, nor could he call to mind one relation that had ever had it: it could not have been indolence that produced it, nor intemperance, for his habits are temperate, and he takes a great deal of exercise in the open air; then what could have been the cause of an attack that first began in the eyes, and afterwards pervaded the whole system, almost every joint, the skin, and even the pleura? His own reasoning on gout led him to the conclusion that it was an animal poison, and, being so, it might be also communicable, and that he had derived it from some one of the numerous patients afflicted with the gout that he had attended from the autumn of 1846 to the summer of 1847.

He further observes that, in one of his visits to a gentleman who suffered from repeated attacks, and in whose room he remained a long time exposed to the effluvia of his profuse perspirations, he showed him his gouty hands, and told him that he considered he had caught the gout of him, or some one else. "I have thought the gout was catching before," was his reply; "I inherited the gout from my parents: father and mother, brothers and sisters, all had gout, but none of my late wife's relations. She became gouty after her marriage, and it in a great measure destroyed her. I have often thought she received it from me."

Again, a patient of the author's, now in business, a very gouty man, declares that none of his relations are so afflicted, and that he became so while he was a valet to a gouty gentleman, whose chalk stones he used often to remove, as well as bandage his legs, and give him every kind of attention when helpless from the disorder.

There is now living in Windsor Forest a former valet to a well-known nobleman, a personal friend to the three last kings, who is crippled by gout, and who relates that, when he first entered this nobleman's service, who was frequently attacked by gout, he was thus addressed by him:—"J——, have

* Provincial Journal.

you ever had the gout?" "No, my lord," was the reply. "Then you will have it. I have never had a valet that did not get the gout before he left me," was the nobleman's rejoinder. And although this man was of an excellent constitution, and not hereditarily tainted by gout, lived in a most temperate and careful manner, and has been all his life one of more than common intelligence, and who avoided all excesses, and adopted such regimen as appeared most likely to cause exemption, he yet got the gout.*

§ VI.—*Diseases of the Skin, &c.*

We have received Nos. 2, 3, and 4 of Mr. Erasmus Wilson's beautiful delineations of Skin Diseases, and can only reiterate the opinion expressed in the preceding Report, that they are the most faithful drawings of the kind ever published; and knowing that the profession in this country, compared with its general acquirements, is but little versed in the subtleties of cutaneous disorders, we would add that the possession of these plates will greatly assist the practitioner in mastering the difficulties of their diagnosis.

The majority of the communications of value on this class of diseases which have appeared since our last Report will be found among our extracts in the present Volume. Of such as have not there been noticed, we shall proceed now to give some account.

33. *Classification of Skin Diseases.*—M. Baron has recently published a classification of skin diseases, which he states that he had devised as long as ten years since, but had, from various circumstances, delayed in bringing forward. The classification is based upon an anatomical basis, in some respects similar to that advanced by Mr. Erasmus Wilson, to whom the priority of publication, though, as it would appear, not of conception, must be conceded. The classification is comprised under the following heads:

1st. *Diseases of the vascular apparatus.*—Roseola, measles, scarlatina, erythema, erysipelas, results of the application of a blister, pemphigus, nævus, and purpura. The principal symptom of all these is redness.

2d. *Diseases of the papillæ.*—Urticaria, prurigo, hyperæsthesia, anæsthesia, and elephantiasis Græcorum. The principal character of these affections is a lesion of sensibility.

3d. *Diseases of the sudoriferous apparatus.*—Abundant diaphoresis, eruption of the sweating sickness, sudamina, miliary eruptions, eruptions accompanying colliquative sweats, vesicular eruptions caused by irritating applications, and herpes. Most of these diseases are acute, and generally connected with a morbid state of the whole system. The most striking local symptom is the existence of isolated or grouped vesicles.

4th. *Diseases of the apparatus secreting the epidermis.*—Pityriasis, eczema, psoriasis, ichthyosis, corns, or warts. The common character of these affections consists in a modification of the epidermic secretion.

5th. *Diseases of the chromatogenous apparatus.*—Lentigo, ephelides both of the hepatic or melanotic description, vitiligo, and albinism. The principal feature here is an abnormal coloration of the skin, which arises neither from congestion of the vascular network, nor from an effusion of blood, nor from the mixture with that fluid of any foreign substance which might give the skin or other tissues a particular tint; nor, lastly, from a decoloration of the blood; but from an alteration in the pigmentary secretion.

6th. *Diseases of the sebaceous follicles.*—Acne disseminata, acne punctata,

* Medical Gazette, Sept. 1, 1848.

acne rosacea, melitagra (?), mentagra, impetigo sparsa, and lupus. The principal lesions to be found in these affections are pustules, and very rarely tubercles.

7th. *Diseases of the piliferous bulbs.*—Lichen, favus, trichoma, alopecia, canities.

8th. *Diseases of the matrix of nails.*—Onygon, exaggeration in the ungual secretion.

9th. *Diseases of the fibro-cellular tissue.*—Ecthyma, rupia, varicella, variola, vaccinia, furunculus. These are inflammatory diseases, which rapidly run through their stages. They are all remarkable (excepting furunculus) for presenting a circular and flattened pustule, the central part of which is formed by the epidermis, raised either by pus or purulent serosity; and the circumference by a red margin produced by an elevation of the dermis.

10th. *Diseases affecting different elements of the skin at the same time.*—Scabies.

11th. Frambœsia, molluscum, &c. are so little known, that the author did not think it necessary to determine their actual seat.*

34. *Roseola Punctata.*—This term is applied by Mr. Erasmus Wilson to what he believes to be a rare and hitherto undescribed form of skin disease, and of which he has only seen two cases. The characters are stated by him to be—febrile symptoms of a subacute type, accompanied by redness of the eyes; slight coryza, redness of the fauces, ushering in an exanthem at the end of three days, the exanthem appearing on the mucous membrane and the skin; in the latter, in the form of small red spots around the mouths of the follicles, then becoming diffused, so as to cover the greater part of the body, reaching its height on the third day; at first, of a bright raspberry colour, afterwards acquiring a dull roseate hue; the entire attack lasting ten days, of which three belong to the febrile period, three to the exanthem, and four to its decline.†

35. *Baldness, and its Treatment.*—M. Cazenave attributes baldness to three special causes:—1st. Those which cause atrophy of the bulb of the hair. 2d. Those which suspend its secretion. 3d. Those which induce disease of the hair-follicle, or the surrounding skin. In the first class are referred *congenital and senile alopecia.* The most common form of alopecia, and those for which the physician is most frequently consulted, are those originating in a simple default of secretion of the hair, there being no atrophy of the bulb. The baldness which so often occurs after fevers, during phthisis, &c., is of this kind. We must attribute to the same cause the baldness appearing suddenly as the effect of extreme exhaustion of body or mind, or of intense moral emotion. This head includes, moreover, two forms of alopecia, arising respectively from *syphilis* and *porrigo decalvans.*

By syphilitic alopecia, M. Cazenave understands baldness arising in the course of the venereal complaint, without previous disease of the skin of the affected part. He maintains, and justly, that it is due to the syphilitic poison, and not, as some have averred, to the mercury exhibited to counteract its effect, having frequently seen it in those who had never taken that drug.

The porrigo decalvans (alopecia circumscripta) is characterised by more or less circular spots on various parts of the head, entirely deprived of hair, and presenting a white and polished surface. Without previous heat or itching, the hairs gradually fall, until a circumscribed portion of skin is left quite bare. The principal seat of this disease is the back part of the head, the temples, and behind the ears. It occurs at all ages; but is rare in infancy, and is more

* Gazette Médicale, and Prov. Med. and Surg. Journal, June 14, 1848.

† Lancet, Oct. 21, 1848.

common in women than men. Its duration extends over a considerable period, never less than several months. As the cure approaches, the spot acquires a redder colour; a light down first appears, and gradually the hair assumes its normal strength and colour.

The third group of alopecias includes, first, those arising from disease of the hair-follicle, as in the baldness following eczema, impetigo, and erysipelas, the cutaneous inflammation of which is propagated to the follicle, and affects the secretion of the hair. The loss of hair consequent on these diseases is not persistent, although the hair rarely recovers its normal thickness. This is more especially the case after obstinate impetiginous eruptions.

In the *porrigo favosa*, there is no destruction of the hair-bulb, but the exit of the hair from the skin is prevented. The hair is twisted and folded on itself, and the bulb from which it grows becomes gradually atrophied. Hence the persistence of baldness originating in this disease.

The secreting apparatus remaining intact, alopecia may arise from a kind of mechanical destruction of the hair, after its escape from the surface of the skin. It is in this manner that is produced the baldness accompanying lepra, and psoriasis of the hairy scalp. But the most common sources of baldness, occasioned in this way, are ptyriasis and ringworm.

Pityriasis or dandriff is the most frequent cause of baldness in women, and consists in a more or less abundant furfuraceous desquamation. The hair, surrounded and compressed at its exit by cuticular scales, becomes dry, readily breaks, and falls off. The efforts made to remove the disease usually increase the loss of hair, and this simple affection may, in the female, become the source of most poignant grief. According to our author, the cuticular exfoliation of ringworm destroys the hair in the same manner.

Treatment of baldness.—Congenital and senile alopecia, as also that arising from favus, are considered by the author to be incurable. In baldness arising from default of secretion, ringworm, or ptyriasis, on the contrary, the hair may be restored as strong and thick as before; but not so in syphilitic alopecia, where the restoration is less perfect.

As a local application, M. Cazenave recommends an ointment made of beef marrow, 30 grms.; tincture of cantharides, cloves, and cannella, of each 1 grm. (15 grains.)

This is applied night and morning, the part having been previously washed with salt water. Repeated shaving and dry rubbing are also very advantageous. When general debility is present, sulphurous baths, with tonics and full diet, are indicated. In *ptyriasis capitis*, it is recommended to interrupt for a time the dressing of the head, and to wash frequently with weak alkaline and emollient lotions. With this treatment an occasional purgative, and the daily use of the warm bath, may be beneficially conjoined.

PART III.—MATERIA MEDICA AND THERAPEUTICS.

36. *Diet and Regimen.*—The important bearing which a knowledge of the principles of human alimentation has upon the prevention and treatment of disease, is a fact willingly admitted by all, professional and extra-professional; but, strange to say, not only is there a very generally diffused ignorance of the properties, relative digestibility, &c., of various articles of dietary consumption,

* Union Médicale, &c.

but there is too often met with a total indifference on the subject. Something of this want of attention is probably, on the part of the profession, due to a species of reaction upon the overstrained doctrines of the chemical school, something, too, perhaps to the opinion that a more minute discrimination of prescribed articles of food savours of quackery. Whatever be the cause, certain it is that, in neglecting to acquaint himself with the therapeutics of diet and hygiene, the regular practitioner deprives himself, to say the least, of a most valuable adjunct to his medical resources, and voluntarily surrenders a *ratio medendi*, which, as is proved by the recoveries occasionally seen under the inanities of homœopathy, is capable *per se* of accomplishing the removal of many forms of diseases, more particularly of the digestive organs.

These remarks have been suggested by the perusal of Dr. Robertson's 'Treatise on Diet and Regimen,' the fourth edition of which is now before us, and which will be found to comprise information not only upon every article of food in general use, but upon various other subjects connected with the maintenance of health. The present edition has been so much amplified, that it may be considered as entirely rewritten—a process rendered unavoidably necessary by the rapid additions to physical knowledge which have been made since the first publication of the work, eleven years since.

Our space will not allow us to give a detailed analysis of Dr. Robertson's two volumes. We can only state, in a concise manner, that the first is taken up with an excellent introductory chapter on the nature and causes of diseases, the sanitary influence of agriculture and civilization in general; and a second, in which the processes of digestion are briefly considered, and the whole range of dietetics, with the chemical constitution, comparative digestibility and nutritiveness of each article clearly enumerated. In the second volume, the hygienic influence of muscular exercise, ventilation, climate, clothing, bathing, and occupation, meet with an equally careful consideration; and there is given, in addition, a succinct account of the several mineral waters, with their therapeutical applications.

37. *Therapeutics in relation to Depuration of the Blood.*—Such is the title of the subject chosen by Dr. Golding Bird for his course of lectures recently delivered before the Royal College of Physicians. The author's object in this erudite communication is to point out the advantages to be derived in the treatment of disease from a rational reliance upon the light afforded by the researches of modern chemistry; which he shows to be more particularly applicable to the direction of such therapeutic agencies as have the power of stimulating the emunctory organs to the discharge of the effete matters of the system, or, as he terms it, the depuration of the blood. At the same time that the author does not underrate the importance of the liver, lungs, and skin in the discharge of their several parts of this great process, he shows that the kidneys must be regarded as the organs of the highest consequence, as they not only possess a function which cannot be participated by other organs, but may also, to a certain extent, become compensatory in their action for the failure in the functions of the other emunctories. For this reason, he would extend the principle of medical treatment known as the "alterative" to the kidney, instead of confining it, as is generally done, to the liver, and would call attention to the class of medicines called diuretics, not as mere hydragogues, but as *renal alteratives*.

With this intention, the author announces a fact which he believes never to have been before acknowledged, viz. that we possess agents, under the term of diuretics, which are able to increase the metamorphosis of tissue, and, at the same time, by stimulating the secretory apparatus of the kidney, to carry the

tissue thus metamorphosed out of the body. In taking a practical view of diuretic agents, Dr. Bird divides them into two classes: those which simply increase the quantity of water, and those which act as *renal alteratives.*

To the former class belong all those agents which, out of the body, exert no chemical action on organic matter, and appear to be incapable of increasing the solid matter in the urine, such as copaiba, broom, juniper, squills, &c. In the second series are included those reputed diuretics which exert the influence alluded to, and act as depurating agents. Among them he names the alkalies and their carbonates, and their salts, with such acids as are capable of being converted into carbonic acid in the animal economy; such as the lactates, citrates, and acetates. These, the author thinks, besides increasing the actual bulk of the urine, exert a direct chemical action upon the tissues, and increase the quantity of the solids. That they do so he proves by actual experiment, the results of which he adduces. The author, in conclusion, earnestly recommends a careful trial of these depurating diuretics in the treatment of chronic affections, distinguished by the presence of some product of imperfect organization.*

38. *Medical Treatment of Surgical Diseases.*—Mr. Hunt is engaged upon a series of papers, to which we beg to call our readers' attention, intended to illustrate the great benefit to be derived from the medical treatment of many of those diseases which are commonly thought to be only amenable to the ruder resources of surgical manipulation.†

39. *Anæsthetic Agents—Chloroform—Tests.*—In order to test the purity of chloroform, Dr. Letheby recommends that it should be washed with three or four times its bulk of water, the water being carefully decanted after each operation; four or five times its bulk of quicklime are then introduced into a retort, and carefully distilled in a water- or steam-bath. The chloroform thus obtained will be fine, and should exhibit the following properties: 1st, it should be perfectly free from opacity; 2d, its specific gravity should be near 1·496; 3d, it should neither redden nor bleach litmus paper; 4th, it should not become opaque when dropped into water; 5th, it should not be whitened with solution of nitrate of silver; 6th, it should not coagulate white of egg. The last two are regarded as important and easy tests.‡

40. *Decomposition of Chloroform.*—Mr. Morson affirms that, under certain circumstances, pure chloroform undergoes spontaneous decomposition, which renders it unfit for respiration. This decomposition appears to be due to the action of the air and light, Free chlorine, hydrochloric acid, and other compounds are formed. These are easily detected and removed. Litmus paper will detect their presence by becoming reddened, and the purification is ensured by repeated washing in distilled water till it ceases to redden litmus.§

41. *Local Anæsthesia.*—The power of inducing local anæsthesia by dipping the affected part in chloroform, or applying externally by means of lint, has been noticed by Mr. Nunneley,|| Dr. Simpson,¶ and others; but as these communications will more properly come under the department allotted to our surgical reporter, we shall here not further allude to them. The first allusion to this method of using chloroform was made in an American journal.**

* Lectures on the influence of researches in organic chemistry on Therapeutics. Reprint from Medical Gazette. † Prov. Med. and Surg. Journal, Sept. and Oct. 1848.
‡ Lancet, Sept. 9, 1848, and Medical Gazette, June 16, 1848. § Pharm. Journ. Aug. 1848.
|| Braithwaite's Retrospect, July 1848. ¶ Monthly Journal. Lancet, July 22, &c.
** Boston Med. and Surg. Journal, April 1848.

42. *Therapeutical Employment of Chloroform.*—Inquiries respecting the medicinal employment of chloroform have progressed since our last Report. In *insanity*, it has been used by Dr. M'Gavin, of the Montrose Lunatic Asylum, with more advantage than had previously appeared. In a case of acute mania it calmed the paroxysm, and induced a state of general tranquillity, which conduced much to the patient's ultimate recovery; and in a case of melancholia, with suicidal tendency, the patient was so sensible of its benefits that, when overwhelmed with despair, she would implore the medical superintendent to repeat the exhibition.*

In *hydrophobia* it has been used twice; in one case it was successful, in the other, which proved fatal, it contributed greatly in assuaging the agonizing spasms.

In irritable stomach, in diarrhœa, and in *cholera*, the internal exhibition has been highly lauded; and by inhalation it has produced beneficial effects, which are unequalled by any other of the numerous remedies which have been tried.

43. *Fatal Cases.*—Since our last Report, there have been four undoubted cases of death from the inhalation of chloroform. The first occurred at Cincinnati, U. S., in February last;* the second at Hydrabad; the third at Boulogne; and the fourth in London.

44. *Naphtha.*—This is another of the many vaunted remedies for cholera, and is said to have been given with great effect in the Russian army. The dose is from ten to twenty drops. The dose was seldom required to be repeated.

45. *Creasote in Erysipelas.*—During a practice of many years, Dr, Fahnestock, of Pittsburgh, has been in the habit of using creasote in erysipelas of the face (as well as of other parts of the body), in both its simple and phlegmonous forms, confining his local treatment to this article alone; and such has been the success of this treatment, that he states he has yet to witness a case which has not yielded to it.

In every case of local crysipelas he immediately applies the purest creasote, with a camel's hair brush, over the whole of the affected surface, extending it some distance beyond the inflamed part, and at the same time administering a dose of calomel, followed by a sufficient portion of jalap, to ensure free catharsis. This, in the majority of cases, is all he finds necessary. But when the mucous membrane of the mouth and fauces is also affected, he pencils those parts with a solution of the nitras argenti, say from half a drachm to a drachm, in an ounce of distilled water.

In the phlegmonous form, it will be found necessary to repeat the application more frequently than in the simple, with the addition of a bread-and-water poultice, applied nearly cold, and well sprinkled with water, strongly impregnated with the creasote, or a cloth, kept constantly wet with the solution, especially for the face.

The creasote, when applied, should cause the parts to become white immediately; if this does not occur, it is not pure. Thus it will be perceived that success depends upon having the best quality of oil. It is worthy of remark that the skin does not become in the least marked by the application, no matter how often it is applied.

46. *Cod-liver Oil, Test of the Purity of.*—Mr. Hockin mixes, on a porcelain slab, four parts of cod-liver oil and one of strong sulphuric acid; when, if it

* Report of the Montrose Asylum, 1848, in Monthly Journal.

† Philalelphia Med. Exam.

be genuine, a rich violet hue is produced, which, in a few moments passes, gradually into a dirty-brown colour. This remarkable characteristic, he observes, is not possessed by any other oil, either animal or vegetable.*

We have already alluded to the effects of this remedy in lupus. (See p. 84.) We may state that we have continued to exhibit it in phthisis, with results quite unattainable with any other medicine.

47. *Mercury in Fractional Doses.*—Dr. Fleming has recorded the practice followed by M. Trousseau, of giving fractional doses of mercury, as the $\frac{1}{20}$th of a grain, instead of the larger quantities usually administered. This dose he gives every hour. Contrary to what might be expected, salivation is rapidly induced, sometimes appearing as early as the end of the first day, and is seldom postponed beyond the third. The advantages of this method of giving calomel are stated to be—1st, the system is brought under mercurial influence as rapidly as by any other plan; 2d, the ptyalism is readily controlled.

In *chronic* diseases, or where it is desired to bring on mercurialism gradually, the same dose ($\frac{1}{24}$th of a grain) may be given every third or fourth hour, when tenderness of the gums will probably not appear before the fifth or eighth day.

In the treatment of constitutional syphilis, lupus, &c,, Hebra, of Vienna, prescribes corrosive sublimate in a similar manner. One grain of the bichloride is dissolved in twelve ounces of water, and of this solution half an ounce is taken thrice daily. In the cases which Dr. Fleming observed of this mode of treatment, salivation presented itself rarely before the eighth day, more commonly about the eleventh or twelfth day.

The merit of having first directed attention to this mode of administering calomel is due to Dr. Law, of Dublin, whose paper on the subject, which appeared in 1839, seems not to have attracted much attention in this country. Dr. Douglas Maclagan has had occasion more than once to verify the statements of Dr. Law.

Dr. Fleming has himself, during the last six months, adopted the practice in about twelve instances with success, in so far as regards the physiological action of the drug. He places in connexion with the above the views of Mialhe on the changes which calomel undergoes in the stomach previous to absorption, and which certainly enable us to understand the *modus operandi* of Law's method of exhibiting calomel. (Traité de l'Art de Formuler, p. 5.) It has long been known that, placed in contact with a solution of an alkaline chloride, as common salt, accompanied or not with muriatic or other acids, calomel undergoes a partial transformation into the bichloride and metallic mercury; and as calomel itself is insoluble, and consequently incapable of absorption, we must attribute its remote physiological action to this change. The interesting experiments of Mialhe show that the quantity of corrosive sublimate formed bears no proportion to the amount of calomel employed, but is in exact relation to the quantity of alkaline chloride present in the solution. Thus, the quantity of alkaline chloride present in the stomach at any one time, being generally not more than sufficient to convert a very small quantity of calomel into bichloride, it is immaterial, in so far as absorption is concerned, whether one grain or one drachm of calomel is administered, as in either case the quantity of bichloride formed is the same. The frequent administration of small doses, as in Law's method, has the advantage of exposing the calomel to the action of a large quantity of the gastro-intestinal fluids.

According to this view, the exhibition of common salt with the calomel

* Pharmaceutical Journal, Sept. 16.

ought to increase its activity in a marked degree, and perhaps the cases of so called idiosyncrasy, where a small quantity of chloride has given rise to severe salivation, may find in this circumstance a rational explanation. On the other hand, the changes in chemical composition which the gastro-intestinal fluids undergo during disease will modify powerfully the action of calomel.*

At a meeting of the London Medical Society, Mr. Hancock mentioned two cases in which he had adopted the above method of giving calomel. In one case he gave $\frac{1}{20}$th gr. every hour, in the other, the same dose every three hours. In the first, salivation ensued at the end of thirty-six hours; in the second, at the end of forty-eight. The ptyalism was milder, and the bowels were not disturbed.†

48. *Tartar Emetic, Injurious Effects of.*—In a paper on the therapeutic value of tartar emetic in pneumonia, the evidence of which, especially in the first stage of the disease, is generally admitted, Dr. Peebles mentions its occasional influence in retarding convalescence, by inducing a state of system analogous to that observed in scurvy. He narrates three cases, in which uncontrollable epistaxis, spongy gums, &c., declared themselves at the ordinary date of convalescence, and which, in two instances, proved fatal.‡

49. *Hydriodate of Iron and Quinine.*—Mr. Battley has introduced a new medicine under the above name. The merit of its composition consists in the fact that the iron exists in the form of a protosalt. The iodine also being in the state of hydriodic acid, acts more mildly than the tincture and its other compounds. The preparation is a syrup, as sugar is necessary to prevent the conversion of the protosalt of iron into the peroxide. The proportions are such that each fluid drachm contains one grain and a half of quinine, one grain of iron, and one grain of iodine as hydriodic acid. The dose is from twenty to thirty drops.§

50. *Turpentine in Hemorrhages.*—Dr. Percy,‖ of Lausanne, writes to recommend the use of turpentine in various hemorrhages, but does not seem to be aware that it is in very common use in this country in such cases. [A more intimate acquaintance with the progress of medical science, as it is exhibited in this Journal, would be the means of preventing many writers from obtruding as novelties, opinions and modes of treatment which, to the practitioner who keeps pace with the literature of the day, are as familiar as household words.]

51. *Bismuth in the Diarrhœa of Phthisis.*—Dr. J. Thompson considers the trisnitrate of bismuth to surpass in efficacy and safety our most approved remedies for this complaint. He has taken every opportunity, during the last twelve months, of testing its powers, and has preserved notes of twenty-one of the cases in which it was administered. Of these eighteen were of phthisis in various stages of progress, and three, bronchitis. In fifteen of the patients the diarrhœa was entirely removed, ; in four, transient benefit was experienced ; and the remedy proved useless only in two instances. The dose administered was about five grains three or four times daily, usually combined with a little magnesia and gum arabic. Dr. Thompson has referred to various authors who have written respecting the properties of bismuth, without being able to collect from them any evidence of its powers in the phthisical variety of diarrhœa, but he entertains a strong conviction of its peculiar appropriateness

* Monthly Journal. † Reported in Medical Gazette, Oct. 13, 1848.
‡ American Journal of the Medical Sciences, May 1848. § Medical Gazette, May 12.
‖ Dublin Medical Press, Aug. 1848.

to this affection, and has obtained important confirmation of his experience in a recent communication from Dr. Lombard, of Geneva.

52. *Indian Hemp—its Active Principle.*—M. de Courtive has presented to the School of Pharmacy, Paris, a thesis on the Cannabis Indica, which attracted considerable attention. His inquiry was directed to it by the effects he noticed it to produce upon the lunatics in the Bicêtre. He has submitted the cannabis to analysis, procuring the plant from Algiers, or from Indian seeds reared in France. The active principle he states to reside in a resin which he extracted by a complicated process of maceration, and the action of alcohol. From nine to ten parts of this resin were procured from 100 parts of the plant, the larger proportion being furnished by the Algerine drug. He wishes to call the resin cannabina; and states that one grain and two thirds, or even, in some temperaments, half that quantity produced an equal effect with half a drachm of thick extract.

An alcoholic extract, obtained directly from the plant, may be advantageously employed; but double the quantity must then be used at a dose, since the active principle is more mixed up with inert matters.

M. Courtive has experimented similarly with the cannabis sativa of Italy, and has thence extracted an active resin, which, however, requires to be given in four- or five-grain doses to produce an effect. He considers the differences between the cannabis Indica and the cannabis sativa to be insufficient to distinguish them as different species; and in this he agrees with Dr. Royle and others.

The resin extracted the author describes as deep greenish-brown; of an aromatic yet nauseous odour; of a hot, acrid, and enduring taste; soluble in cold ether, alcohol, and volatile oils; insoluble in water and dilute spirit. It would appear to contain some fatty matter and chlorophyle.

The leaves are looked upon as the most active parts of the plant.

53. *Atropia, Therapeutic Agency of.*—Atropia is the name given to an alkaloid which represents the active principle of belladonna. It crystallizes in white prisms, is very soluble in alcohol and ether, but not so in water. It is an energetic poison, one sixth of a grain being sufficient to produce the toxical effects of belladonna. As it is an expensive article, and therefore very liable to be adulterated, Mr. Donovan has prepared a process by which it may be obtained pure. He recommends that a drachm of the commercial atropia should be dissolved in an ounce of rectified spirit. If there be a residuum, it is to be separated; then add six ounces of distilled water, and shake the mixture. No change appears at first, but after twelve or eighteen hours the atrophia crystallizes into beautiful stellated groups adhering to the sides of the vessel. These, after pouring off the liquor, are collected on bibulous paper, and dried.

Bouchardat exhibits atropia internally, in those diseases in which belladonna has been found useful; as epilepsy, pertussis, &c. He begins with $\frac{1}{12}$th gr., increasing gradually to $\frac{1}{6}$th. For external use, the watery solution of eight grains to an ounce is the best. M. Cuvier* has by this succeeded in breaking up old adhesions of the iris, after several weeks' daily application.

54. *Nux Vomica as a Purgative.*—Mr. Boult, of Bath, suggests, in the 'Provincial Journal,' the addition of a small portion of the extract of nux vomica as a remarkably powerful adjuvant to purgatives. He says, "I ascertained that an aperient scarcely sufficient by itself to produce a single evacuation, when combined with this extract, caused active purgation. The dose

* Annales d'Oculiste, 1847, and Monthly Journal.

must be varied according to the patient's idiosyncrasy; but, generally speaking, a pill, containing three quarters of a grain of Barbadoes aloes, three quarters of a grain of the extract of rhubarb, and half a grain of the extract of nux vomica (Pharmacopœia Edinensis), if taken at bedtime, will produce one, or perhaps two, full evacuations the following morning. The addition of a single grain of calomel to this pill will cause two or three bilious motions.

[There is no novelty in this. We have, for some years, been in the habit of combining strychnine with an aperient extract with considerable advantage in habitual constipation.]

55. *Stramonium as an Emmenagogue.*—Dr. Jones, of St. Louis, U.S., speaks confidently of the emmenagogue properties of stramonium, believing it to possess a power of altering the secreting functions of the uterus to a degree not found in other so-called emmenagogues. He gives a case in illustration, which, however, is anything but conclusive.*

56. *Therapeutic Powers of Galvanism.*—Confirmation of therapeutic powers of Grapengiesser's method of applying galvanism by plates of silver and zinc, united with a copper wire (vide Abstract, Vol. VI, p. 77), has recently been afforded by Mr. Wells, who details the results of this treatment in the Civil Hospital of Corfu. The cases in which its efficacy has been tested are—ulcers, 30 in number; fistulæ, 5; fungous growths, 5; nervous disorders, 5. The conclusions which arise out of his observations are these:

1st. That to secure the good effects of the apparatus, the surfaces of the plates must be perfectly smooth and clean, and each must be applied to a spot previously denuded of cuticle; thus, when the effect is required upon one open surface, a small puncture must be made at some other spot, to form the second.

2d. Experience has proved that one of these surfaces must be above the other, and the zinc plate must always be on the uppermost.

3d. When the zinc plate is placed on a slight excoriation, and the silver one upon a suppurating surface, the excoriation is in two days converted into a superficial eschar, an inch in circumference. In six days the slough will have extended to the cellular tissue, and present all the appearance of an eschar from caustic potass.

4th. When an ulcer presents an indolent or lardaceous base, it is destroyed by the application of the zinc plate for three days, and healthy granulations arise. Fungous or exuberant granulations are acted upon in the same way.

5th. When the silver plate is applied to a surface simply denuded of skin, the zinc being placed above, on another such surface, even, although the former be freely suppurating, it is very rapidly dried, and covered with a dense pellicle.

6th. When the two plates are similarly applied, the surface beneath the silver being a deep ulcer, rapid and healthy granulation follows. If the silver plate be left upon the granulating surface, after this has reached the surface, these become exuberant and flabby. In practice, therefore, the apparatus should be removed as soon as the granulations reach the surface, and when this is done, spontaneous cicatrization follows.

7th. When the silver plate is applied upon the superior portion of a very large ulcer, this portion only improves in appearance, while the inferior portion degenerates; but if the plate be applied upon the lower portion only, the whole surface of the ulcer improves equally.

* Philadelphia Examiner, May 1848.

8th. In cases where several ulcers exist upon a limb, and the zinc is applied to a superior, and the silver to an inferior one, or to denuded surfaces, all the ulcers situated in a direct line between the two plates improve in appearance, become healthy sores, and cicatrize, while those on either side of the current remain unaltered, and sometimes degenerate.

9th. When the silver plate is applied upon the extremity of a fistulous sore, but little effect is produced; while, if a projecting portion of the silver be carried to the bottom of the fistula, granulation rapidly follows. To fulfil this object, Dr. Cogevina has silver plates perforated by screws of the same metal, the points of which are adapted to the shape of the fistula, and readily projected more or less by a simple turn of the screw. The application in these cases need not be more than a few days; for as soon as healthy granulation commences, the apparatus may be removed, and cicatrization rapidly succeeds.

10th. In several cases normal innervation has been restored in paralysed parts under the use of this apparatus, the zinc being placed superiorly, and the silver inferiorly, so as to include, as nearly as possible, the whole of the paralysed part. Disordered function of particular nerves has been also remedied by so placing the two plates that the nerve lies between them.

12th. The action of the zinc plate is an excellent substitute for the common moxa, and for the caustic potass when obliteration of a vein is denied. In some cases of varicose ulcer, while the silver plate has been used to hasten cicatrization, an eschar has been purposely formed by the zinc over the dilated vein above, in order to obtain a radical cure; and these objects have been readily effected.*

—In a paper on the same subject, Mr. Hinton does not give so favorable an account of the action of the galvanic plates. He notices that the scar left by the slough has a very uneven surface, and would not be tolerated in many cases.†

* Medical Gazette, May 26. † Ibid., July.

II.

REPORT ON THE PROGRESS OF SURGERY.

BY HENRY ANCELL, ESQ., M.R.C.S.

1. The discovery of Gutta Percha, of Collodion, or the American adhesive fluid, and of Hydrated Cotton as a remedy for deafness occasioned by perforation of the membrane of the tympanum, will be regarded as among the most interesting novelties recorded in our present Volume. A considerable number of very valuable surgical papers have been laid before the profession since the period of our last Report. The 'Transactions of the Medico-Chirurgical Society of London,' in particular, contains some of the most important; and we regret that, in consequence of the extent of our extracts, and a general index, we shall be enabled to furnish our readers with but a very partial abstract, particularly of those which have been recently published.

2. Gutta Percha.—This remarkable substance has been for some time past in the hands of the profession, but we abstained from noticing it until we met with some general statement of its employment in surgery; the paper by Mr. Lyon, of Glasgow (art. 60, p. 150), has furnished us with the opportunity; and we have now only to refer our readers to our copious extracts therefrom, and to request them to consider the physical qualities of the material, that they may be apprised of its extensive utility, and with these data every surgeon will be enabled to judge for himself as to the cases in which it ought to be preferred to splints, starch bandages, and other contrivances; we shall only further state, in this place, that, in our own practice, we have employed it in several severe cases with the greatest advantage, and that our experience, to a considerable extent, confirms the account given by Mr. Lyon.

3. Collodion.—The interest of our journal will be increased by the account we are about to give of another extraordinary discovery, for which we are indebted to our transatlantic brethren, and which, in the opinion of those who have been the first to introduce it to the profession, bids fair to produce another great advance in practical surgery, we allude to the new American adhesive fluid (art. 49, p. 137). As remarked by the 'Boston Medical and Surgical Journal,' "one achievement prepares the way for another, and we are again taken by surprise with a new preparation, being a solution of cotton in ether." Of its adhesiveness not a shadow of doubt can be entertained, nothing, however, will compare with it in this respect, and it is thought that an entire change in the mode of dressing wounds will follow.

Professor Schonbein appears to have shown, in the first instance, the solubility of gun-cotton in sulphuric ether, and C. T. Jackson, remarked upon this solution, and exhibited specimens of it before a Natural History Society in America, in December 1846, or January 1847, illustrating its use as a brilliant varnish. Dr. H. J. Bigelow, soon afterwards, prepared a bottle according to Dr. Jackson's directions, and, while employing it as a varnish, accidentally smeared it on a fresh wound on the finger. The smarting produced called his attention to the wound, and he endeavoured immediately to rub it off, but it had dried nearly instantaneously, and remained on, the smarting soon ceased, and when

the film was removed union had taken place. Since this time Dr. Bigelow has employed it as a dressing for wounds, especially those which it is desirable to unite rapidly by the first intention. The following are the properties of the fluid upon which its surgical application depends:

1st. By its powerful contraction, upon evaporation, it places the edges of an incised wound in much more intimate contact than is obtained by sutures and adhesive cloth—unites them by equal pressure throughout the whole extent of the wound, and maintains them immovably fixed.

2d. It preserves the wound perfectly from contact with air—being impermeable to the atmosphere, while its adhesion to the skin is so intimate as to preclude the possibility of the air entering beneath its edges.

3d. The substance remaining in contact with the skin and wound after the evaporation of the ether seems to be entirely inert, so far as any irritating property is concerned, and this can hardly be said of any resinous adhesive cloth or preparation.

4th. It does away with the necessity for sutures in incised wounds of almost any extent.

5th. It is sure to remain in intimate contact with the skin until union is complete—and being quite impervious to water, and presenting a polished surface, it allows the surrounding parts to be washed without regard to the wound or dressing.

6th. It is colourless and transparent, thus permitting the surgeon to witness all that goes on beneath, without involving the necessity for its removal.

7th. No heat is necessary for its application, and the presence of any moderate degree of cold is only objectionable in retarding the evaporation of the ether.

8th. It may be made at a trifling cost—an ounce phial, intrinsically worth little, being sufficient for a great number of dressings.

It is not incised wounds alone which are amenable to its use, though the mode of its application to a stump, or an ulcer, or any wound involving an extensive loss of skin, must be modified.

It is of the first importance that this preparation be properly made and applied. The process for the application is very simple.

For straight incisions, of *whatever length*, provided the edges can be brought together without great difficulty, it is better to apply the solution in immediate contact with the skin, as follows. The bleeding should be arrested, and the skin thoroughly dried. If the lips of the wound are themselves in contact, the surgeon has only to apply a coating of the solution lengthwise over the approximated edges by means of a camel's hair pencil, leaving it untouched after the brush has once passed over it till it is dry, during, perhaps, ten or twenty seconds. This first film will of itself have confined the edges together; but in order to increase the firmness of the support, more must then be applied in the same manner, allowing it to extend on either side of the incision half an inch or more. If, however, the wound gapes, an assistant is required to bring the edges in contact, and retain them so whilst the application is made. If the incision is so long that the assistant cannot place the edges in apposition throughout the whole extent, begin by covering a small portion at the upper end, and apply the solution to the lower parts as fast as it becomes dry above. In this case something more than the film which is left adherent to the skin will be necessary for a safe and proper support to the wound, which may have a tendency to separate. The transparency of the dressing may be still maintained by adapting a piece of gold-beater's skin, or oiled silk, to the wound. This should be covered with the solution, and the membrane applied after the coating is on and already contracted. A dossil of lint, or a strip of cloth, or

even a piece of tissue paper which is thus rendered tough and waterproof, will answer the same purpose, though not transparent. Where there is much separation, it is better to fortify the wound in this way at once, and as fast as the first coating is applied and dry.

In dressing the wound left by the removal of the breast, the preparation may be applied in the same way. If, however, adhesion by first intention be not desired, the gum may be painted on in transverse strips, like adhesive cloth, letting the first strip dry, and giving it the gold-beater's skin support before the second is applied. Thus room is left for the escape of pus, and the exposed portion may be watched without removing the strips.

As a dressing after the operation for hair-lip, or cancer of the lip, where union by first intention, and a narrow linear cicatrix are so desirable, this answers particularly well. The use of one or two sutures to the mucous surface is not obviated, as the solution will not adhere to the moist epithelium, or to a surface secreting mucus, with sufficient certainty. But this does not interfere at all with the satisfactory result upon the cutiele, as the skin will be probably united before the necessity for removing the sutures arrives.*

In operations for the restoration of parts, as, for instance, the nose, where union by first intention is important, there is no reason to doubt that it would succeed perfectly, as it fulfils so entirely many of the requirements for such union. The same of all plastic operations; and a drop placed upon a small cut, or the puncture of a subcutaneous operation, seals it hermetically.

In dressing an ulcer, where there is, of course, a loss of soft parts, it is better to apply it through the intervention of some medium. A strip of cloth or gold-beater's skin is to be cut of sufficient length, and the two ends covered thickly, an inch or more, with the solution. This strip is applied like a strip of adhesive cloth, so that the middle of the cloth, where there is none of the solution, shall come over the ulcer. After all the strips are applied, the air may be excluded by painting the cloth upon the outside over the ulcer with the solution. The same contraction goes on in drying, and so approximates the edges of the ulcer, and gives it firm support.

The momentary pain arising from the direct application of the ether to an incised surface, which is extremely acute, may be, in a great measure, prevented by the intimate apposition of the edges of the wound. Again, this stimulus is brief, and probably more than counteracted by the refrigerating influence of the evaporating ether. There are undoubtedly cases when such a stimulus would prove beneficial. It is even possible that the rapidity of the union which takes place under a coating of this gum, may be due, in part, to the influence of this stimulus.

Dr. Bigelow mentions some of the surgical uses of the solution of gun-cotton, unconnected with the dressing of wounds. It may probably, he states, be applied instead of starch to a bandage enveloping a limb. Here, again, its power of contraction is a desideratum, as a snug casing is generally desired, and the force is exerted equally. Perhaps the limb may be immersed in the solution without the intervention of the bandage. Several coatings will here be required. Its use as a means of rendering pasteboard splints impervious to water has been suggested by Dr. H. J. Bigelow; and a hundred other applications may be made of it at the bedside by the surgeon, who knows its nature and qualities. The pathologist, with his abrasions thus protected, may enter the inflamed peritoneal cavity with impunity, or examine fearlessly the products of inoculate lesions. In dissection, hang-nails, sores, or abrasions of any kind, will be thus fully protected.

* The Boston Medical and Surgical Journal.

Dr. Payne, dentist, Montreal, appears to have suggested the use of the collodion in burns,* and Dr. Crawford, of the same city, employed it in the case of a young gentleman who met with a severe burn of the face and hands. The burn thus treated was covered with a thin glazing, or varnish, which completely excluded the air. The pain almost instantly subsided, and if the exclusion of air be the chief desideratum in such cases, this remarkable fluid will more conveniently and effectually produce it than any other remedy. Its utility in burns has been confirmed by other practitioners.

4. The Hydrated Cotton, as a remedy for deafness, with the cases to which it is applicable, and its mode of application, are so fully described in the copious *résumé* of Mr. Yearsley's pamphlet (art. 45, p. 111), that it is unnecessary to do more, in this place, than refer to the extract.

5. Impermeable Spongio-piline.—In addition to these discoveries, another substance newly introduced into surgical practice by Mr. Markwick, although a patented article, merits notice. It is a fabric composed of wool and sponge felted together, and then rendered impermeable at the back by means of a coating of Indian rubber. It is stated to possess all the requisites for an efficient and unobjectionable poultice or fomentation cloth, retaining for many hours the essential qualities of warmth and moisture; all that is necessary being to soak it well in hot water, then press out the fluid, and confine the moist spongy surface, as hot as the patient can bear it, closely on the part affected, by means of a linen roller or a handkerchief. Its effects are said to be delightfully soothing and effectual. Its superiority over ordinary poultices and fomentations is testified to by Dr. Conquest, Dr. Basham, Dr. Badeley, and Mr. S. Burman. Mr. Markwick has also patented a beautifully soft waterproof woollen fabric, called simply *Impermeable Piline*, to be used as a covering for the chest, knees, and other parts of the body in rheumatism, neuralgia, and other affections; which is said to be by no means a less useful invention than the former.† It may be employed as a means of applying liniments, &c., and is made up as knee- or shoulder-straps, chest protectors, anklets, lumbago bands, socks, gloves, and in many other forms.

Although these discoveries and inventions may not answer all the expectations of those individuals to whom the profession are indebted for them, or those who have been the earliest in the field to test their application, they must be regarded as very important additions to the resources of surgery; we have no hesitation in saying they are calculated, in a very material degree, to promote the great desideratum—simplicity in the treatment of surgical cases.

6. Anæsthetic Agents.—The periodicals of different countries have teemed, since our last Report was printed, with cases and observations on the use of these agents, but the most important circumstances recorded are several fatal cases, occurring suddenly after the administration of *chloroform*, and some interesting papers on Local Anæsthesia.

The following are the fatal cases in question, in addition to I, that of Mary Grecner, recorded in our last Volume (p. 251):

II. Mr. W. Badger, æt. 22, whose father stated that he had always been in good health, but it appeared that he was subject to palpitation after violent exertion. He sat down on a chair, in the surgery of Mr. Robinson, an eminent dentist in London, for the purpose of having some stumps of teeth extracted; before he had taken six inhalations he said that the chloroform was not strong enough—he was laughing and talking; in a moment afterwards his hand dropped from the part of the chair whereon it was resting, then his head, and he never spoke or moved afterwards; the witnesses

* The British American Journal, Aug. 1848. † Medical Times.

affirmed that he had not inhaled the chloroform one minute, and he was not more than five minutes in the surgery until his death. About a drachm and a half of chloroform was used altogether. At the time of death the face was livid, pupils dilated, temperature of the body lower than natural, and on attempting venesection only a small quantity of blood could be obtained. On post-mortem examination, the heart and liver were found extremely diseased. The heart was pale and flaccid, and its parietes attenuated, and its tissue interspersed with "fatty degeneration;" the mitral valves were unequal, and slightly rugose; the liver was fatty, preternaturally large, weighing eight pounds, and encroached upon the chest. The broad feature of this case is, that an individual appearing to enjoy good health, although affected with extensive disease of the heart and liver—a circumstance by no means unprecedented—died in the period of one minute under the influence of chloroform, introduced into the blood by inhalation.*

III. The third is a case of a young lady, æt. 30, who had recently suffered from chlorosis and palpitations. She was affected with an abscess in the right thigh, supervening a wound. Dr. Gorré, surgeon of the hospital at Boulogne, employed about a teaspoonful of the chloroform in a handkerchief; immediately on respiration of the vapour, the patient first became agitated, and moved her hands convulsively, and she was soon motionless and unconscious. Dr. Gorré then made an incision into the abscess; after he had done so, he heard one or two deep and laborious inspirations, and seeing no further signs of *returning* animation or consciousness, he examined more particularly, and found every appearance of life extinct. During an hour a movement, or pulsation, was observed in the course of the jugular veins, and several fruitless attempts at resuscitation were made. On post-mortem examination, abundant bubbles of air were found interspersed with a pale red fluid in the cerebral veins, the jugular veins contained air and no blood, and the veins of the left lower extremity contained air and blood; there was a considerable quantity of bloody serum in the left side of the chest, and in the pericardium; the heart was fat, large, flaccid, empty, and collapsed; the skin was of an alabaster whiteness, and the blood throughout the body fluid, and as black as ink. The stomach contained a considerable quantity of half-digested food. Drs. Rouxel and Gros reported to the Procureur de la République that death was the consequence of syncope, produced by the suspension of the cerebral functions under the anæsthetic influence of chloroform, rendered more readily fatal by the abnormal organic condition of the heart, that in all probability the air in the veins was produced spontaneously, as in some of the cases of sudden death recorded by Morgagni, and that this might have rendered the death from chloroform more sudden and inevitable.†

IV. The fourth case, which, in point of time, should have preceded the other, is that of Mrs. Simmons, a nervous woman, æt. 35, who inhaled the chloroform at a dentist's. She took the vapour from a Morton's inhaler, breathing at first slowly; she inhaled 12 or 15 times, occupying from 60 to 75 seconds; the face was at first pale; at the expiration of the above period four roots of teeth were extracted, the patient groaned, and manifested what the female attendants considered evidences of pain, although she did not speak; as the last root came out, which was about two minutes from the commencement of the inhalation, the patient's head turned to one side, her arms became slightly rigid, and her body drawn somewhat backwards; at this period the female attendant, placing her finger on the pulse, found it feeble, and it immediately ceased to beat; respiration also ceased about the same time, and

* Lancet, July 8. † Ibid. July 24.

the face and finger nails now became livid, the lower jaw drooped, the tongue projected at the corner of the mouth, and the arms were perfectly relaxed. The most persevering efforts were made to resuscitate her; ammonia, cold-water affusion, mustard, brandy, &c., were first employed. Medical aid was obtained about 36 minutes after respiration had ceased, when artificial respiration, electro-magnetism, and external stimulants were resorted to. The electro-magnetism caused active muscular contraction, but had no effect upon the heart; and some slight removal of the lividity of the countenance was produced by the artificial respiration, but not the slightest sign of life was manifested; one of the dentists present thought life was extinct in about five minutes, another says about ten minutes. On post-mortem examination, 26 hours after death, bloody froth was found issuing from the mouth; two or three ounces of fluid blood, intermixed with bubbles of air, flowed from the sinuses of the dura mater, and there was a larger quantity of blood than usual in these vessels; a small quantity of bloody serum was contained in the pericardium and pleuræ; the heart was flaccid, and all its cavities entirely empty, and their inner membrane deeply stained; the aorta, pulmonary arteries, and cavæ within the chest were empty, and a very small quantity was found in the abdominal vena cava; the lining membrane of all these vessels being deeply stained. The kidneys were congested, the liver pale, and empty of blood, the stomach and intestines distended with gas; the blood was fluid as water in every part of the body; not a coagulum to be seen in any vessel; under the microscope the globules appeared altered somewhat in form, some were irregular in shape, and they appeared generally distended, and more globular than normal; they were also somewhat fragmentary, a part apparently having been ruptured, and their number somewhat diminished; the colour of the blood, in many parts of the system, was that of dark venous blood.*

v. The fifth case has been reprinted in the journals from Allen's 'Indian Mail' of July 4; it occurred at Hyderabad, in Scinde. A drachm of chloroform was administered to a young woman, of an apparently healthy constitution, by means of a pocket-handkerchief; a few convulsive movements occurred; when these subsided, the surgeon made the necessary incision for the amputation of a finger, which occupied only a few seconds, and scarcely a drop of blood escaped; she was then placed in a recumbent posture, with her head low, to bring her out of the state of coma into which she had apparently fallen; artificial respiration and other means were resorted to for five hours, but she never breathed again. The operator states that he thinks death was instantaneous, for after the convulsive movements above mentioned, she never moved, nor exhibited the smallest sign of life. No post-mortem examination was made.*

vi. Dr. Anderson, of Birkenhead, allowed a dentist to administer chloroform to him, prior to extracting a molar tooth, on Friday, March the 10th, The rest of the day he felt much excited, and experienced a "peculiar rushing of the carotids." He had suffered from pectoral symptoms for some time previously, and on the day following the inhalation, had burning pain in the back of the chest; about 11 o'clock at night, hemorrhage occurred from the lungs, of which he considered the chloroform the exciting cause. Measures appropriately active were resorted to by his medical attendants. The hemorrhage returned twice in the following day, and again on the 13th and 15th, when it resulted in fatal syncope. The opinion given to the coroner by Dr. Robertson in this case was, "that the deceased died from natural causes, and not from the effects of chloroform;" the opinion of Mr. Macdougall was "that

* The Western Lancet and Hospital Reports, March 1848. † Lancet, July 22, p. 99.

the deceased most probably suffered from tubercles of the lungs, and that the exciting cause of the hemorrhage was the inhalation of chloroform."*

VII. The seventh case is recorded in the following statement to the Academy of Medicine, made by M. Robert. A young man, twenty-four years of age, very corpulent, but of a sluggish, lymphatic constitution, was admitted into the Hôpital Beaujon on the 25th of June last, wounded in the left thigh by a ball, which had entered anteriorly, and passed out behind, injuring greatly the limb. The disarticulation of the thigh was decided on. The patient was placed under the influence of chloroform. In three or four minutes after the commencement of inhalation, convulsive movements characterised the stage of excitement, which were soon succeeded by complete insensibility. M. Robert immediately commenced the operation, and the patient scarcely lost a drop of blood. When, however, the first incisions were made, for an instant the patient appeared to show signs of returning sensibility, and M. Robert ordered the chloroform again to be inhaled. Hardly had a quarter of a minute elapsed before the respiration became stertorous, at which moment the apparatus for inhaling was removed; the face and lips turned deadly pale, the pupils of the eyes became dilated, and turned upwards under the lids. The operation, of course, was immediately suspended, and M. Robert, with his assistants, did all in their power to restore the patient, whose breathing was now become short. The pulse was, however, perceptible, but the limbs were completely relaxed. Frictions on the skin were immediately used, the pituitary membrane was irritated, and the arms and chest stimulated. Frequently the respiration appeared about to be renewed, and the pulse appreciable; but these favourable symptoms were only momentary, and, after three quarters of an hour's incessant efforts of the surgeon and his assistants, it was found that no symptoms of returning life were manifested.

M. Robert was inclined to think that the condition of the wound under which the patient laboured, producing a great shock to the nervous system, such as usually attend gunshot wounds when inflicted on important joints, and the moral disposition of the patient, all tended to produce the fatal result.†

VIII. We observe a notice of the death of Mr. Carruthers, a gentleman of fortune, who lost his life from the incautious application of chloroform; he was affected with asthma, and had frequently obtained relief from the agent. He was found dead in the morning, sitting at a table in the same position the servant had left him the preceding night, with the chloroform and handkerchief before him. We have not at present seen the account of this case in the medical journals.‡

In appreciating the importance of the above cases, we are bound to take into the account the fact of their occurrence at a period when anæsthetic agents were *sub judice*, and that the total number of deaths recorded constitutes a very small proportion indeed of the numbers of individuals who, during the period in question, have been subjected to the anæsthetic influence. Mr. Robinson states that he had employed the agent between *three and four thousand times*, before the fatal case occurred which is the first in the above list. It is not to be concealed, however, that injurious results, short of death, sometimes occur. For instance, Mr. H. Popham relates the case of a young lady, apparently in perfect bodily health, but of "a nervous and excitable temperament," in whom chloroform produced convulsions and the recurrence of a paroxysm of insanity;§ and the author publishes the case, to show the necessity of ascertaining, before we venture upon giving it, "that the brain be free from disease." Thus, the facts before us seem to imply that the *heart*, *lungs*, and *brain*

* Lancet, July 22.

† The Medical Times, July 22.

‡ The Times, Nov. 12, from the Carlisle Patriot.

§ Lancet, August 5.

must be in a *physiological* condition, before we can administer chloroform with perfect safety. The case of Mrs. Simmons especially, indicates that the *Temperament of Civilization* (the nervous temperament), at all events when highly marked, must be regarded with distrust in reference to the production of more or less complete anæsthesia. These cases justify our remarks upon the subject in our last Report,* and the general principle there developed will be found to comprise the means of avoiding the most deplorable consequences. We should not convey to our readers the actual state of this great question, if we omitted to mention that Dr. Simpson continues the general—nay, almost universal—employment of chloroform; he has just published another elaborate paper† containing, with other interesting matter, "the Results of the Practice of Anæsthesia in Midwifery." Dr. Simpson delivered about 150 patients in this artificial state; he has not met with a fatal result, nor does he admit of any injurious effects having been produced either in the mother or child; his paper contains also reports from numerous acoucheurs, the tenor of the whole being most favorable to the practice. We were inclined, in the first instance, to attribute Dr. Simpson's success to the *visus et tactus eruditus*, by which he is enabled to reject that small number of individuals in whom a state of anæsthesia, produced by chloroform, would be death, and by which he is enabled to regulate its action safely; but it does not appear that he makes any discrimination of cases, and, according to the last paper, his experience appears to be supported by that of many other individuals. The most remarkable circumstance is, then, that the evidence at present before us of the effects of anæsthesia in the parturient state, is opposed to that which applies to anæsthesia in general surgery, and the profession must necessarily await the extension of its statistics before it can arrive at a definitive judgment upon the whole question. (See Midwifery Report.)

Local Anœsthesia.—Dr. Simpson some time ago published a paper, to show that the production of a state of general anæsthesia, before the performance of surgical operations, is not an idea of modern times.‡ We have received an essay from the same gentleman, in which he states that the ancients seem also to have entertained the idea of producing a state of *local* and limited anæsthesia in the part to be operated upon; in illustration of which fact Dioscorides is quoted. More than half a century ago, Moore ingeniously proposed to effect a local anæsthesia of any limb that was to be operated upon, by previously compressing, with tourniquets and pads, the nervous trunks going to the limb, and the plan was tried under John Hunter, with but partial success, upon a patient at St. George's Hospital, London. Dr. Simpson proceeds to relate experiments performed by himself, 1st, upon the lower animals; and, 2dly, upon man; with a view to the possibility of the production of such a state of local anæsthesia, by the local application of chloroform, or other anæsthetic agents, to individual parts of the body, and has arrived at the following conclusions:

1st. In animals belonging to the class of Articulata, complete local and limited anæsthesia can be produced by the local and limited application of the vapour or liquid of chloroform to individual parts of the body of the animal.

2d. In Batrachian Reptiles, the tail, or an individual limb, can be affected in the same way with local anæsthesia, by the local application of the chloroform; but, in addition, general anæsthesia of the animals usually results in a

* Half-Yearly Abstract, Vol. VII, p. 247.

† Monthly Journal, Oct. 1848, p. 209.

‡ Monthly Journal of Medical Sciences, 1847-48, p. 451.

short time, in consequence of the chloroform absorbed by the exposed part coming to affect the general system.

3d. In the smaller Mammalia, a single limb, or even the whole lower or pelvic half of the body, can be rendered anæsthetic by local exposure of these parts to the influence of chloroform.

4th. In the human subject partial, and perhaps superficial, local anæsthesia of a part, as the hand, can be produced by exposing it to the strong vapour of chloroform; but the resulting degree of this local anæsthesia is not sufficiently deep to allow the part to be cut or operated upon without pain.

5th. Any agent possessing a stronger local benumbing, or an anæsthetic influence, would probably be dangerous, by its acting too powerfully on the general economy, before the local anæsthesia was established to a depth sufficient for operating.

6th. Artificial local anæsthesia, from any known anæsthetic agents, seems objectionable in any part intended to be operated upon, in consequence of the vascular congestion and injection which attend upon and accompany this local anæsthesia.

7th. There are few operations in which there is not previously a local broken surface; and the application of chloroform, &c., to such a surface, would be far too painful to be endured, no small degree of suffering sometimes arising from even the exposure of the unbroken skin to their action.

Dr. Simpson's paper is of the more importance since Mr. Nunneley, of Leeds, has performed some interesting original experiments, to prove the *value* and *safety* of the local application of anæsthetic agents.* Mr. Nunneley states, that either by *immersion* in a small quantity, or by the *vapour applied* merely for a limited period, a limb may be rendered *perfectly motionless and senseless*, and what may be an additional advantage, *fixed in any desired position.* He had immersed his finger in these fluids for about half an hour or an hour, and at the end of this period the finger was nearly powerless and insensible, and that it was forty-eight hours before the effects entirely disappeared, a sensation of heat and discomfort extending along the tract of the nerves to the axilla. Before operating on a difficult case for artificial pupil, he had applied, for twenty minutes, a small quantity of the vapour of chloroform to the eye, by means of a small jar which accurately fitted the orbit, with the effect of rendering the parts nearly insensible. The first effect of these agents, when locally applied, is to produce redness, heat, and smarting, which subside, followed by swelling and redness of the integuments, which remain for some time. Mr. Nunneley states that he could completely paralyse any limb of frogs or toads by immersion or exposure to the vapour, in about five minutes or less; and he mentions, as a curious fact, that if the exposure to the influence were continued longer than was sufficient to produce a local effect, this influence extended to the corresponding limb of the other side: thus, for instance, if one hind leg became *too much* influenced, the other hind leg partook of the same effect; if the fore leg were too much affected, then the other fore leg became so likewise, and, subsequently, the whole body; a result which Mr. Nunneley mentions as strongly corroborative of his experiments with prussic acid, as detailed in the last volume of the 'Provincial Transactions.'

A further practical illustration of this principle is reported by Mr. Spry, surgeon to the Truro Infirmary, who resorted to the local application of chloroform in the case of a tumour, two inches long and one inch wide, on the sole of the foot, which had to be removed. Folded lint, saturated with

* Provincial Journal, June 28, 1848.

the chloroform, was applied to the tumour, and a piece of oiled silk placed over it. In a quarter of an hour, the lint was again moistened with the chloroform, and in about half an hour, about two drachms having been employed, he could bear pressure on the tumour without complaining. The patient declared after the operation, that he felt only a very trifling pain at the deepest part of the dissection, but none during the division of the skin, cellular membrane, &c.*

—We find an extract, bearing date some time antecedent to these latter communications, from an American journal, to the effect that chloroform had been applied with success to a wound of the hand, in which the radial nerve seemed to be implicated. A piece of sponge was moistened with the anæsthetic agent, and applied to the wound, over which a piece of oiled silk was bound, and on the next morning, all traces of the painful implication of the nerve are said to have been removed.†

7. Gunshot Wounds.—This subject is treated of so extensively in the French journals, that it would constitute a volume to give anything like a complete statement of the principles and practice adopted and discussed by the leading surgeons in Paris. The insurrections of Paris and other continental cities have given civil surgeons of the highest eminence an opportunity of investigating, we may say thoroughly, this important branch of surgery, which has hitherto been treated of mainly by military surgeons. The circumstances under which the wounded have been placed, in the recent combats, differ very materially from those which accompany the ordinary course of military and naval warfare, and new views and enlarged statistics are likely to open upon the subject. Sufficient time has not yet elapsed for the results of treatment to develope themselves in full, or that the whole may be collected and compared, but it cannot be doubted that some experienced surgeon will undertake to do this, and that, before long, we shall meet with a complete treatise which will enable us to bring these results before our readers. In the meantime, we introduce a condensed statement of M. Velpeau's lectures, as furnished for the 'Lancet' by M. Victor de Méric (Ext. art. 46, p. 115), selecting these as the most complete, practical, and methodical papers before us, and on account of the experience and high reputation of their author; and we purposely abstain from confusing our readers with a detail of partial statistics and controverted points, until the innumerable facts which must develope themselves in the continental hospitals have been more deliberately considered. There are some very striking circumstances in M. Velpeau's treatment of these injuries. It will be observed, that he is a strong advocate for the practice of our own Wiseman, and the French Le Dran, viz. where primary amputation is necessary, to operate quickly—in the "period of stupor," a period defined as lasting from twenty-four to thirty-six hours—not waiting until reaction is established, and inflammation set in. If, from any cause, amputation is not performed immediately, he then defers it until a still later period, and he is thus opposed entirely to that school of surgeons who, with Faure, Bilguer, and Hunter, advocate delay or repudiate amputation altogether. Professor Velpeau objects also to the use of anæsthetic agents, upon the principle that, when the nervous system is already so much depressed, as in the stage of stupor after a gunshot injury, it is not expedient to employ agents which, like chloroform, produce their effects by depressing the nervous energies. Another more striking circumstance in the extracts in question, is the remark of Velpeau on the analogy between the after-symptoms of gunshot wounds and cases of poisoning, and his opinion that these symptoms are really produced by a poison generated in the tissues

* Provincial Journal, Aug. 28, p. 459. † Medical Times, May 20, 1848.

from stagnant blood or secretions, and absorbed and conveyed into the blood; so that the supervening condition is truly a blood disease. As a general rule, M. Velpeau advocates amputation when gangrene sets in, before the appearance of a line of demarcation, admitting, however, of some exceptions. His great reason for this practice is, that so soon as deleterious substances are absorbed into the blood, the organism will not be able to cope with the double effects of the poisons and of the operation. He is against the practice of incision, as adopted by Dupuytren. M. Velpeau is a powerful advocate of the contagiousness of hospital gangrene, and of its animalcular origin.

He regards the position of a wounded limb as an item, in the treatment, of very great importance, but instead of adopting a dogmatical rule, like some recent writers upon this subject, he points out that the position should be appropriate to the circumstances and stages of wounds. During phlegmonous inflammation, for instance, it should be kept elevated, but if purulent matter be formed, no measure could be more erroneous in principle, or more injurious; a dependent position being then required to prevent the formation of sinuses, and to form an obstacle to the purulent matter graduating towards the trunk.

—Amongst the other papers before us on this important and extensive subject, we may mention a letter from Dr. C. Kidd, of Limerick, addressed to the Editor of the 'Dublin Quarterly Journal,' with some most interesting details from the Paris hospitals.* Our limited space completely excludes any abstract of this letter, and we can do no more than recommend its perusal to all who interest themselves in the subject; they will find important facts and statistics from the practice of MM. Gerdy, Morel-Lavellee, Jobert, Malgaigne, Gosselin, Roux, Manec, Voillemier, and Baudens, as well as Velpeau. Dr. Kidd remarks, that the principal hospitals were completely inundated with frightful cases, and he believes that whatever else may result from the insurrection, it is likely to be attended with very eminent advantages to surgery, and the treatment of gunshot wounds in particular.

—Dr. Waters has also published a paper more recently on the same subject, in which he attempts to estimate the value of the different modes of practice, and to throw light on points respecting which diversity of opinion still exists.†

8. Pendulous Tumours.—In the department of general surgery, after the various papers on gunshot wounds, perhaps there is no other subject which has been so fully and practically treated as this, by Dr. O'Ferrall.‡ There is no class of cases in which the science is more frequently brought to bear upon the art of surgery, in all countries, seasons, and localities, than in this, and we shall accordingly bring before our readers the substance of this important essay. Dr. O'Ferrall sets out with the remark, that pendulous tumours have peculiar characters arising from their form, their depending position, and the nature of their attachments, and, in a great degree, from their organization and the functions of the part from which they spring. Those which arise internally from the mucous and serous membranes, have received from pathologists more attention than those which occur externally, and of the latter, *molluscum* is almost the only variety which has been specially considered. Dr. O'Ferrall's paper accordingly treats more especially of the external pendulous tumours, and it comprises most interesting cases, illustrated by woodcuts.

Of the *Anatomical Characters* of such tumours:—Some are common to all, others are peculiar to the situation of the morbid growth. A prolonga-

* Aug. 1848, p. 216. † Monthly Journal, Oct. 1848, p. 251.
‡ Dublin Quarterly Journal, Nov. 1847.

tion of the common integument forming the pedicle, is expanded over the tumour, and is here either equal and smooth, or irregular and warty, according to the organization of the locality. The length of the pedicle appears to be, in a great measure, determined by the size and weight of the tumour; but the apparent length is often much greater than the reality. This arises from traction. The correction is easily made by poising the tumour on the hand. The skin immediately recovers its natural situation, and the actual length of the pedicle is seen. In operating, it is desirable to establish this point, in order to avoid a cicatrix unnecessarily large.

When the pedicle, Dr. O'Ferrall remarks, is narrow, an artery and accompanying vein occupy a considerable portion of the thickness of the neck, and distribute branches through the bulbous portion. The artery is sometimes so large as to yield a pulsation equal to that of the radial artery of a child. The ramifications are extremely minute. It is difficult to accomplish the injection of the vessel, for the contraction of the skin, when the part is removed from the body, suddenly diminishes the volume of the tumour in a remarkable degree, and expresses the liquid contents of its cellular tissue. The pedicle, which before operation was, perhaps, four inches long, becomes instantly shortened to an inch and a half or two inches, and recedes upon the surface of the tumour.

The vein, in such tumours, is a simple cylinder, its radicles being, like the branches of the artery, exceedingly minute. No structure analogous to valves can be detected. This, the author remarks, is worthy of observation, as connected with the tendency to œdema and lividity which those productions, when of any considerable size, invariably exhibit. The circulation is less simple in the adipose variety. The pendulous nævus may also be supplied by more than one vessel. The same may be true of the pendulous tumour which has become malignant; but the arrangement will be found to depend on the breadth of its attachment to the surrounding parts.

The general appearance of the section of pendulous tumours is that of areolar tissue, more or less hypertrophied, and containing in its meshes a limpid secretion. The whole has a pearly or whitish semi-transparent appearance, when of the simplest kind. The granulations which spring from these tumours, when the skin has given way, have invariably the red fleshy tint of a highly organized part.

To the tissues already named, and which constitute the simplest form of pendulous tumour, may be added others, which give it a special character. Thus the cellular tissue may contain adipose substance in quantity sufficient to give it the character of a fatty tumour. The cellular tissue may be occasionally the basis of an accidental erectile formation. The tumour in such cases has the uneven purple colour of the nævus, and is capable of great reduction in its volume when compressed between the fingers. A section of these tumours shows the numerous apertures of vessels divided in different directions with respect to their axes.

When a tumour of the pendulous kind grows from the nipple or areola of the female breast, it will be found to include some elements peculiar to the part. The glandular follicles descend with the tumour as it grows, and form a part of its structure. These follicles become hypertrophied, and add to the volume. The growth of tumours springing from the areola is more rapid than that of others in the neighbouring portions of the female breast. Dr. O'Ferrall has not seen any pendulous tumour in the latter situations as large as those which are productions of the areola. He was consulted by a lady who had two pendulous tumours on the right mamma; both were, according to her account, on the part as long as she could remember. One was about the

size of a small pea, soft, without colour, and suspended by a pedicle of extreme tenuity, growing from a point two inches distant from the nipple. The other was as large as a chesnut, brown in colour, and slightly irregular in its surface. The pedicle of the latter was thicker, and grew from the areola, quite close to the nipple.

The presence of the glandular and sebaceous follicles in these tumours imparts to them other characters. Their surface becomes irregular; they are bedewed with a secretion, which acquires a peculiarly fetid odour if allowed to accumulate. Patients are so much afraid to touch or irritate such tumours, that the secretion is permitted to concrete on the surface. When this is irregular, and when the hypertrophy of the follicles causes them to project, the whole assumes a warty appearance, each projection being coated by the concretion, slowly, but constantly increasing, until it assumes an appearance resembling ichthyosis. These verrucous projections can be separated to the depth of two or three lines, the cleft being found moist, and emitting an offensive exhalation.

A section of a tumour of this description exhibits a remarkable lactescent whiteness in every part except at its margin, where the warty-looking prominences are found, contrasting strongly with that of the simpler productions from other parts of the breast. Dr. O'Ferrall has met with but one variety of malignant growth (the encephaloid) in these tumours.

Morbid alterations in pendulous tumours.—Pendulous tumours, nourished according to the general laws which preside over other portions of the same organism, are susceptible of the same morbid changes. Some of these seem to depend on the retardation of the circulation within the tumour, from their depending position. The arterial supply increases with the volume of the tumour itself. There is not that provision by which the venous circulation is supported against gravity in other parts. The enlargement of the tumour is thus accompanied by a disposition to congestion. The capillaries of both systems become dilated, and the surface acquires a purplish tint, in some places inclining to the arterial, in others to the venous hue.

Some increase of solidity is generally added to the other characters of the tumour at this period. This *induration* of the cellular tissue and skin is irregularly disposed, and (if the tumour be large) gives the surface an uneven figure, which may excite suspicions of a malignant taint. The experienced practitioner will have no difficulty in distinguishing, by the touch, the hardening here alluded to, from any more formidable degeneration.

Œdema of pendulous tumours is another condition to which the capillary congestion almost inevitably leads. The surface of the most depending part gives a doughy sensation; and this is occasionally so great as to decide the inexperienced, and lead to the opinion that matter has formed. If the cellular membrane be of loose texture, this mistake is more likely to occur. Dr. O'Ferrall saw a lady some time ago with a pendulous tumour growing from the right labium, the size of a large orange, with a pedicle four inches in length. The bottom of the tumour was discoloured, and had the mark of a lancet puncture, made by a practitioner the day before, with the view of giving exit to matter. Nothing but serum, mixed with blood, had escaped. The tumour was removed at once, and no further accident occurred.

Suppuration will, however, take place in pendulous tumours exposed to much friction or injury. A gentleman consulted Dr. O'Ferrall on account of a tumour growing from the right natis, close to the transverse fold. The pedicle was broad, and about an inch long, consisting of the surrounding integument, drawn down by the weight. The fundus had a small opening through which pure pus was constantly oozing; a probe passed into this aper-

ture could be made to move freely in a cavity an inch in depth. The remainder of the tumour was palpably of the adipose kind, some portions having undergone remarkable solidification. The whole mass was the size of a melon. It was easily removed. The cavity of the abscess was lined by false membrane, similar to that found in an ordinary abscess.

Abrasion of the cuticle covering a tumour, in which œdema has been established, gives rise to some curious alternations of increase and diminution of its volume. The whole tumour becomes anasarcous in many cases; and, when abrasion takes place, it is succeeded by an oozing of serum, resembling that which occurs from the legs of dropsical patients. The bulk is rapidly diminished by the escape of this watery fluid. If the patient remains in bed, the part heals, and the former size is again reproduced. This alternation of increase and diminution has been described to Dr. O'Ferrall by several persons labouring under the disease.

Ulceration of the skin is deserving of especial notice, on account of the resemblance which the granulations occasionally bear to the fungus of malignant disease. The fundus of the tumour may exhibit in succession all the changes already described — congestion, œdema, abrasion; and at length the entire thickness of the skin gives way. The granulations which are produced from this surface, irritated by the patient's dress, and congested, from their position, present an aspect very different from that of granulations from any original portion of the organism. They are large, dusky red, easily made to bleed, and exhaling a very fœtid odour. Their exuberance sometimes exceeds their vital power, and they slough and throw off a portion of their surface.

Hypertrophy of the cervix is sometimes observed to follow the general inflammatory state of the bulbous portion, produced by friction or irritation. Dr. O'Ferrall has observed this change most frequently in those which spring just below the occiput. The neck becomes indurated and enlarged; its colour vascular and dusky; and it is painful when pressed. This induration may take place without much discoloration, but it generally extends itself a little way into the surrounding skin. The tumour now seems to droop less, and the cervix to be more erect, and shorter than before.

If the section of the neck of a tumour in this state be made in the manner suited to those with narrow pedicles, there is a probability of its being reproduced. The cicatrix left after the operation is more prominent and harder than the surrounding skin, and gradually becomes elevated into a new tumour.

Independent of the more chronic alterations, this class of tumours may become the seat of acute inflammation. In a case of erysipelas, which spread over the chest of a lady, a pendulous tumour the size of a filbert, growing from the areola, suffered in common with the neighbouring parts, and, possessing less vitality than them, sloughed in the progress of the case. In another case, the tumour inflamed; bullæ, containing a dark fluid, formed on its surface, and a superficial ulcer remained on the subsidence of the attack.

History of pendulous tumours.—They are apparently more frequent in female patients than in males. They may be congenital, or formed at any subsequent period of life. Of the *former class*, some remain stationary, or grow so little after birth, that their growth cannot be said to keep pace with the development of normal parts. They are found, at a mature or advanced period of life, to be in size nearly as they were observed at the time of birth, having lost, perhaps, the plumpness belonging to the skin of infancy, and their colour being changed by age with that of the surrounding skin, or a little deepened or dusky at the bulb from venous congestion. Others, after remaining stationary for an indefinite period, enlarge, inflame, and become the

seat of morbid action, or the nidus of morbid deposit. The earliest change is often traced to some accidental friction or laceration, to which, from their form, they are so much exposed. When a pendulous tumour begins to enlarge, its hypertrophy is attended by some or all of the other phenomena described in the beginning of Dr. O'Ferrall's memoir under the head of *morbid alterations.*

In this category may be included those tumours which, existing in a different form at birth, acquire their pendulous shape at a later period, and apparently in consequence of an increased volume, the weight of which occasions, by traction, an elongation of the skin. The pendulous nævi are generally so formed. At birth there may be a simple elevation of the skin, stained, as usual, by the colour of the blood contained in the erectile tissue. The colour varies from one shade to another. This elevation of the skin may remain unchanged for years, and at length begin to expand; but once the impetus is given, the bulk of the swelling generally increases; and if the growth is so situated that gravitation is almost constantly operative, the pendulous form is eventually acquired. The characters of such a tumour will be found to vary according as the circulation through its vessels is free; or as consolidation of these channels and the surrounding cellular web has taken place. In the former case the tumour, when pressed between the fingers, becomes flaccid and pale; and when the pressure is removed, the fulness and colour of the part gradually return. When a tumour of this kind is accidentally pricked, it bleeds freely, and indicates the nature of its contents. If, on the other hand, the tumour be of long standing and considerable size, and its vessels have become solidified, the part gives to the finger the sensation of a number of solid cords running in different directions through the mass. Neither the colour nor the volume can be materially diminished by pressure. The diagnosis of this peculiar modification of nævus will generally be assisted by the presence, in the neighbourhood, of erectile tissue in a less equivocal form.

In the *second class* we shall find the simple cellular and the adipose tumours, in either of which the malignant degenerescence may eventually take place. The early history of these cases is that of all similar formations. The cellular tumour is generally described as beginning like a "*soft wart*" and its enlargement is ascribed to injury or laceration from accident. The external appearance will be found to vary according to the locality, organization, and peculiar function of the spot from which it springs. There is a peculiar arrangement in some. The surface of the growth seems to be formed by a number of vegetations growing parallel to each other at right angles to the surface of the tumour. Each of these elevations presents, at its extremity, a cuticle thickened and hardened into a warty consistence, and with a brownish-gray colour, different from that of the remainder. Dr. O'Ferrall does not consider this appearance to be peculiar to productions of the dermoid tissues. The mucous membrane may give origin to warty growths exactly resembling what has been now described. The adipose tumour frequently becomes pendulous when circumstanced favorably. When large, and of long duration, it may present any of the morbid changes already alluded to. Dr. O'Ferrall has seen abscesses form in a pendulous adipose tumour; and he has removed pendulous fatty tumours of long standing, in which he has found distinct nodules of malignant deposit.

Thus, whether congenital or otherwise, some pendulous tumours become malignant, while others remain exempt from heterologous deposit to a late period of life.

Dr. O'Ferrall believes, however, that a pendulous tumour is rarely the seat of encephaloid or cancer at the period of its first formation. This is his pre-

sent impression, and if future experience confirms the opinion, it will follow: *First, that all pendulous tumours should be removed at the earliest period at our disposal; and, secondly, that they can be done so with the fairest prospect of a permanent cure.*

The grounds for the opinion that pendulous tumours are never malignant at the period of their origin, are, first, that Dr. O'Ferrall has removed tumours of this kind, containing tubera of encephaloid, and which were suspended by a pedicle of thin healthy integument; and, secondly, that when encephaloid is deposited in or under the integument, its further development or reproduction is always in a lateral direction, where it has most support, and it therefore does not become pendulous. If encephaloid accumulated in the forward rather than in the lateral direction, the cuticle must soon give way, and expose the fungus. The tumour would thus be prevented from remaining undetected sufficiently long for the formation of a stalk or pedicle, by the traction occasioned by its weight.

Treatment.—It has been shown that some of those tumours, after remaining stationary for years, become the seat of morbid action or morbid deposit. The best rule of practice is to remove them when first presented to our notice, unless some clear contraindication be present.

In its simplest form, the pendulous tumour seems to require merely the division of its pedicle by a knife-edged scissors or scalpel. If the section be made too near the bulb, an unsightly projection will remain after the operation; if it be done too near the other extremity of the pedicle, the integument, on retracting, will leave a wound, and consequently a scar much larger than could have been anticipated. Allowance, then, must be made for the elongation of the pedicle by the weight of the bulb, and for the contraction of the stalk, which always follows its division. The best mode of proceeding is to poise the tumour on the hand, and allow the surrounding skin to retract and recover its pristine position, and then to make the section of the pedicle a little below its origin. Should the nutritious artery be large enough to deserve attention, the jet of blood may be prevented by previously including the neck of the tumour in a provisional ligature, and, when the section is accomplished, tying the divided artery. The provisional ligature may then be removed altogether. A slight touch of the nitrate of silver, just sufficient to produce a delicate white coating, will not shorten the duration of the subsequent smarting, but lessen the probability of any reaction, especially of an unhealthy kind. It has appeared to Dr. O'Ferrall that whatever seals up the cellular tissue, or the orifices of divided vessels of every denomination, diminishes the tendency to diffuse troublesome inflammation. Simple water for dressing will then complete the local treatment.

In operating on the adipose pendulous tumour, the extent of interference with the pedicle will be regulated by the presence or absence of fatty matter in its substance. If the growth extend through the neck into the subcutaneous cellular membrane beyond it, such an incision must be made as will allow of its complete extraction. In such a case, the small cavity then left should be filled with lint dipped in olive oil, and the integument brought gently over it, to prevent an unnecessarily large cicatrix. The lint is withdrawn when suppuration is established, and the integuments brought together by adhesive plaster.

The proceeding in the case of pendulous nævus must be adapted to the peculiar circumstances of the case. It is not usual for the pedicle, in such instances, to be entirely free from all traces of erectile tissue. Should it be implicated, or the vessels of the cellular or dermoid tissues beyond it be hypertrophied, a simple section would be inadequate to the cure; hemorrhage

of a troublesome nature would be the immediate result, and reproduction of the disease the more remote consequence of such an imperfect procedure. The diseased part must be included in an elliptical incision, and thus freely and completely removed.

It may happen that the erectile formation may extend irregularly for a considerable distance. In such cases, the amputation of the pedicle alone would entail the consequences already alluded to, while the excision of the whole of the morbid structure might be forbidden by its extent, or by the importance of the parts in which it is found. The following is the mode recommended under such circumstances, and when the removal of the tumour is desired. The tumour being held horizontally and on the stretch, the point of the style or nail cautery, described by Dr. Wilmot, should be passed through the cervix in several places, so as to ensure the obliteration of the vessels contained in that place. The whole cervix may be traversed by these punctures at one or several successive operations, according to its breadth. When the vascular character of the cervix is thus changed, its section may be performed without risk of hemorrhage. A series of seton threads would accomplish this object, but in a manner much more tedious and painful to the patient. The mode of obliteration of erectile tissue employed by Dr. Wilmot is a great improvement on the previous practice in such cases. Its adaptation to pendulous tumours previous to their section will be found available, and Dr. O'Ferrall recommends it.

When a pendulous tumour is known or suspected to be malignant, great care must be taken to remove the entire of the morbid parts. If the heterologous structure be confined to the bulb of the tumour, and the pedicle or surrounding skin be healthy, there can be no reason for more than simple section of the former; but this should not, for obvious reasons, be made too near the bulb. But should the neck of the tumour be thickened, hardened, or irregular, a free elliptical incision should be made in the integument beyond it, and all suspicious parts satisfactorily removed.

9. Injuries and Diseases of the Head and Neck.—A work on this department of surgery, consisting of a selection from the 'Memoirs of the Royal Academy of Surgery of France,' was issued for the year 1847-8,* by the Sydenham Society. The volume contains the important memoirs of Quesnay and Louis on wounds of the brain, and the use of the trepan; that of Lassus on wounds of the superior longitudinal sinus; Louis on the fungous tumours of the dura mater; Ferrand on hernia of the brain; Bordenave's interesting and important 'Summary of Observations on the Diseases of the Maxillary Sinus;' the same author's memoir on certain exostoses of the lower jaw; Louis on bronchotomy; Martinière on perforation of the trachea; and Malle's cases of swelling of the tongue. Although this is merely a reproduction of some interesting works of the most eminent French surgeons of the middle of the last century, and can in no way be regarded as appertaining to the progress of surgery at the present period, yet many of these papers will be new to the exclusively English reader. The whole of them are eminently practical; and a knowledge of their contents is indispensable to every surgeon who wishes to acquaint himself with the histories of the subjects of which they treat. The reader will find, interspersed throughout the volume, many highly important practical precepts—too frequently lost sight of subsequently, and then reproduced as novelties—most forcibly illustrated and insisted upon. There is also appended to the work a list of additional me-

* Observations on Surgical Diseases of the Head and Neck. Translated and edited by Drewry Ottley.

moirs on diseases and injuries of the head and neck, contained in the five quarto volumes of the French Academy, including diseases of the nose, eyes, and head, and papers on hare-lip, salivary fistula, and diseases of the interior of the mouth. The republication of these works, with the numerous cases which they contain, is calculated to promote the real advance of science, by preventing the insertion, in our periodicals, of similar cases as novelties, instead of merely additions to our statistics; and the repetition of remarks and reasonings, as new, which have been long since adopted from some of the greatest proficients in surgery. The periodicals contain also the following suggestions belonging to this head:

10. *Improvement in the Operation of Hare-lip.** — The plan appears to have been proposed by M. Phillips, of Liège, and lately adopted by M. Jobert, at St. Louis, in a case in which the palate was divided, and the nose deformed. It consists in raising each flap after refreshing its edges, and dissecting its base on each side with a bistoury from below upwards to the maxilla, thus detaching the alæ nasi from their deep connexions. This done, each side of the jaw and alæ nasi are drawn downwards and forwards, so as to set the nose completely free; and for the purpose of fixing it in its projecting and normal state, the base of the alæ nasi is slit with a long needle, placed transversely. Compresses are placed over the dissected cheeks, in order to facilitate their adhesion to the parts below, and to prevent the nostrils again becoming flattened. These are put on after the sutures are applied to the hare-lip, and after the transverse division of the nose, and are thus fixed with starch bandages. In this manner a perfectly well-formed nose may be made, detaching the cheeks and the alæ nasi from their adhesions to the maxilla, so as to fashion the nose and lips conveniently. without any visible cicatrix or external wound. The idea of dividing the base of the nose transversely with a long needle, so as to raise and *shape* the nose, appears to be a real improvement in the operation.

11. *Extirpation of the Velum Palati.*—A case is reported from one of the Italian hospitals of extirpation of the velum palati with the bistoury. It appears that M. Blandin was the first to perform the operation, with the ligature, at the Hôtel-Dieu, at Paris.† This surgeon laid it down as a principle, that it would be imprudent to resort to the knife, on account of the danger of wounding the palatine arteries, and of hemorrhage; but M. Mirrich records a case in which he employed the bistoury. The case was that of a man, in whom the velum was thickened and depressed, so as to cover the posterior wall of the pharynx; and behind it there were numerous excrescenees, proceeding from the posterior part of the nasal fossæ. There was a vegetation, the size of a chesnut, on the posterior wall of the pharynx. The pillars of the fauces were degenerated, and covered the tonsils, also converted into encephaloid. The nostrils were impervious, the tongue pushed to the right, strabismus of the left eye, deglutition difficult, speech almost unintelligible, attacks of threatened suffocation. The operation was begun by ablation of the velum palati; it was seized on one side with Museaux's forceps, and drawn forwards, then penetrated at the centre of the base with a bistoury, and completely exeised, first on one side, then on the other. The flow of blood was trivial; and the operation proceeded with the extirpation of the tumours of the pharynx, the pillars of the fauces, and, as much as possible, of the tonsils. There was now a good deal of bleeding, evidently from the interior of the tonsils. The actual cautery was applied, also compresses steeped in a concentrated solution of alum; but the bleeding was arrested

* Annales des Thérapeutiques, Feb. 1848. † Ibid. vol. ii, p. 280; vol. iv, p. 108.

with difficulty. The twelfth day after the operation the eschars were detached, but the whole of the diseased mass was not separated. The actual cautery was again applied; and three weeks afterwards the patient appeared to be quite cured, although it is probable that the disease may return. Existence, at all events, was considerably prolonged.

Another Italian surgeon, Dr. Médoro, has also treated successfully a cancerous affection of the velum palati. He extirpated it with the bistoury, and applied the actual cautery. These cases appear to show that the velum palati may be removed without danger from hemorrhage.*

12. *Extirpation of the Superior Maxilla.*—In the case of a young woman, æt. 28, Mr. Falloon extirpated the maxilla for a fibro-cartilaginous tumour in the anterior maxilla. The steps of the operation, which was completely successful, are accurately detailed in the work from which we quote. On making a section through the tumour, it was found to consist of a dense fibro-cartilaginous structure, with spiculæ of bone interspersed. Most of the original bone appeared to have been absorbed; and a case had been made for the tumour by the deposition of new bone.†

13. *Carcinoma of the Œsophagus.*—A case, in which the tube opened into the aorta, is given by Professor Pfeufer, of Heidelberg. The disease of the œsophagus progressed with the usual symptoms, until a catheter could not be made to penetrate into the stomach, and only the smallest quantity of liquid could be swallowed. The morning after the last attempt to pass the catheter, which produced violent pain, the patient threw up about three pounds of frothy arterial blood; the hemorrhage returned in the evening, and death took place. On examination, a carcinomatous ulcer was found in the œsophagus, about the size of a five-franc piece, nearly on a level with the bifurcation of the trachea, communicating with the aorta by an opening, with irregular edges, an inch and a half in diameter, and with the trachea by an opening half the size.‡

14. *Salivary Calculus.*—M. J. Antonio de Boy records a case which traversed the centre of the base of the tongue transversely. It was eighteen lines long, and from four to eight or nine wide.§

15. *Tracheotomy.*—A very interesting case of laryngitis in a phthisical patient, in which this operation was performed with success, although the patient died six weeks afterwards, will be found related by Dr. Barker in the volume just issued by the Medico-Chirurgical Society of London.‖ Profuse hemorrhage occurred; and the patient was twice nearly suffocated by the entrance of blood into the trachea. In Louis's memoirs, in the work to which we have referred at the commencement of this section, the case will be found of a soldier who was nearly suffocated after bronchotomy, by the escape of blood into the trachea; and a suggestion occurs that the effects of the accident may be obviated by making the patient lean forward, with his head supported over the side of the bed, and his face to the ground.¶ Position, certainly, ought not to be lost sight of under such circumstances.

16. Injuries and Diseases of the Abdomen.—Several occasions have presented themselves in the course of the publication of these volumes, to show that the opinions and practice of surgeons are undergoing considerable modification as respects the difficulties and dangers of the section of the peritoneal cavity. Mr. Hancock has recently forwarded us—

* Lib. cit. March 1848, p. 464. † Dublin Quarterly Review, Nov. 1847, p. 491. ‡ Zeitschrift für Rationelle Medicin. § Encyclographie, June 1848, from the Gaceta Medica. ‖ Transactions, vol. xxxi, 1848, p. 51. ¶ Lib. cit. p. 246.

"*A Short account of a case of Disease of the Appendix Cæci cured by Operation*,"* in which, as far as a single case goes, the views of the more modern and bolder surgeons are confirmed by a new mode of treatment, adopted successfully. Mr. Hancock appears to entertain a very strong opinion on the subject, and trusts that the time will come when incisions into the abdomen will be successfully employed in cases of *peritonitis* terminating in effusion, which usually end fatally; those cases where the patient sinks and dies, and upon examination a quantity of offensive, turbid, serous, flocculent effusion is found in the abdominal cavity. In many such, whether puerperal or otherwise, the post-mortem appearances are totally inadequate to account for death. On one essential point, Mr. Hancock's pathological doctrines are in accordance with those which we have had occasion to refer to in a former page, as propounded by M. Velpeau, and entertained by some of the most eminent men of the present day; it is the stagnation and the decomposition of the effusion, which, by poisoning the economy, is the cause of the typhoid symptoms and the fatal result, and the fluid destroys by its character rather than by its quantity. The operation proposed is an *incision*, carefully made, extending for an inch and a half or two inches, from the anterior superior spine of the ilium inwards above, and as close as possible to Poupart's ligament, so that the effusion may drain away. The trocar should on no account be employed; for, setting aside the existence of adhesion, there is never sufficient space between the intestines and parietal peritoneum to prevent the risk of wounding the former with such an instrument; but by dissecting carefully down, the surgeon may open the abdomen with comparative safety to the patient.

In Mr. Hancock's case there were symptoms of peritonitis, and of some mischief about the cæcum or its appendix; treatment had been of no avail, and the patient, a female, was evidently sinking. She was put under chloroform, and an incision, about four inches long, made inwards from the spine of the ilium above Poupart's ligament, but as close to it as possible. Upon opening into the abdomen, a quantity of excessively offensive, turbid serum, with fibrinous flocculi, poured out, mixed with air-globules, and also patches of false membrane. She was directed to be turned on her side, that the discharge might freely escape, and a poultice to be applied. The treatment consisted in opiate draughts and enemata, with occasional small doses of calomel, plenty of nourishment and stimulants; and she went on favorably during thirteen or fourteen days, when two small balls of fæcal matter, surrounded with calcareous deposit, were found in the wound, which balls, from their size, Mr. Hancock imagined to have escaped by ulceration from the appendix vermiformis. From this time she was treated with quinine and opiates, and continued gradually to improve. At the expiration of three weeks from the discharge of the fæcal substances, the wound was entirely healed, and she left London a few days afterwards.

17. *Intestinal Obstructions.*—An important paper has been drawn up upon this subject by Mr. Benjamin Phillips,† who has collected the histories of 169 cases of intestinal obstruction from internal causes. The whole paper is worthy of a careful perusal; but we can only find space for the author's conclusions:

1st. That intestinal obstructions, dependent upon causes acting within the abdominal cavity, are by no means of rare occurrence.

* Read before the Medical Society of London, Sept. 25, 1848.

† Mr. Phillips on Intestinal Obstructions, Med. Chir. Trans., vol. xxxi, p. 34.

2d. That they may occur at any period of life, and that although a particular variety of obstruction may be more frequently seen than another, at a particular period of life, there are still so many exceptions to the rule that we cannot rely much upon the probability that a particular obstruction is present at a given period of life.

3d. That the diagnosis of the existence of an obstruction is usually not difficult.

4th. That the diagnosis of the nature and the seat of the obstruction is, in most cases, most uncertain and unsatisfactory.

5th. That, beyond the general history of the case, the most probable means of ascertaining the seat of the obstacle is, to follow carefully the distended intestine up to the point of obstruction.

6th. That under ordinary treatment, these cases are fatal in the proportion of, probably, seven out of nine.

7th. That although no reliance can be placed on purgatives, on mercury, on opium, or any variety of injection, and that although, in many cases, they seem to aggravate the suffering, yet, as it is unquestionable that, in some cases, they have been administered with relief, we cannot advise that they should be discarded, but we doubt the prudence of continuing to use them beyond two or three days.

8th. That the interference by surgical operation is justifiable, when three or four days have passed without any relief from ordinary means (provided the constipation be complete, and vomiting of fæcal matter continue), because it affords a greater chance for the preservation of life than ordinary means.

9th. That if the indications as to the seat of the obstruction be sufficient to satisfy the surgeon, it is at or near that point that the incision should be made, but if there be much doubt, it is most prudent to make the incision on the median line.

10th. That if it be found impracticable to remove the cause of the obstruction, or imprudent to make any extended search for it, relief may be obtained by forming an artificial anus at as near as may be prudent to the seat of the obstruction; and that if it be, as it frequently is, near the termination of the ilium, an incision on the median line admits of its accomplishment as near as may be to the termination of that intestine.

18. Dr. E. Alonzo has described a case of *internal strangulation* produced by displacement of the spleen and pancreas. A woman was seized, without any manifest cause, after an operation for fistula, with pains in the abdomen, bilious vomiting, intense thirst, red and dry tongue, scanty urine, rapid contracted pulse, and constipation. Under the influence of energetic treatment these symptoms subsided in four days, but they returned in a more severe form six days afterwards; meteorismus set in, nooses of intestine could be perceived through the abdominal parietes, and a hard tumour, about three inches in diameter, was found in the right iliac region; in the eight days from the relapse, stercoraccous vomiting set in, and forty-eight hours afterwards the patient sank. On post-mortem examination, the peritoneum was found inflamed and dilated, loops of intestine adhered to each other, and to the intestinal walls. There was a tumour in the right iliac fossa, covered by omentum; on cutting through the latter, a cavity was penetrated containing fluid blood; an hypertrophied and softened spleen adhered to the parietes of this cavity, for which a kind of cyst had been formed by the omentum anteriorly and behind, and laterally by the great intestine, the convolutions adhering together, and to the spleen. The spleen, adhering firmly to the end of the pancreas, dragged upon this viscus, which had taken a vertical position, and

passing anteriorly to the transverse colon, compressed and strangulated this intestine.*

19. *Hernia.*—Mr. Allan, of Epsom, records two cases, in one of which gradual reduction took place spontaneously, long after all attempts to produce it had been abandoned as impracticable; and in the other, not only reduction, but a permanent radical cure was obtained. In the latter, which was a very remarkable case, it was probable that the inflammation, occasioned by a truss, had extended to the subcutaneous tissues, and obliterated the inguinal ring, the bronchial sac becoming gradually absorbed; symptoms of strangulation had not occurred in either case.†

20. *Herniotomy.*—Dr. Pirrie's communication on '*The Modes of Proceeding in regard to the Hernial Sac in the Operation for Strangulated Hernia*,'‡ contains a statement of the various reasons for and against the *intra-peritoneal* and the *extra-peritoneal* modes of division. We have extracted from this paper four cases, in which the stricture was produced by a band of lymph effused from the serous coat of the intestine, and surrounded it and constricted it as by a ligature, (Ext. art. 39, p. 92). In such cases, and in others, where the stricture is formed by the sac, or within it, the extra-peritoneal mode is quite unsuitable, and great caution is necessary before the surgeon decides upon adopting this method, lest this should be the seat of the stricture; just as great caution is also necessary when the sac has been opened, to ascertain whether membranous bands do or do not exist. After admitting, as a general principle, that in cases where the stricture is external to the sac, the extra-peritoneal division is decidedly preferable, as being attended with much less danger, Dr. Pirrie gives a detail of the exceptional cases. Scarpa, Pelletan, Cloquet, Hesselbock, and Lawrence are quoted on the subject of adhesions and the various obstacles to reduction. It is shown that, under several conditions, if the sac be not opened, reduction is impossible; that if the sac be opened, two of these, at least, may be overcome—first, recent soft adhesions, formed by coagulable lymph; and, second, filamentous adhesions—which can be either broken down by the finger, or divided by the knife. Other cases present an insuperable impediment to reduction, as natural adhesions taking place within the abdomen before the hernia protrudes, and close, organized adhesions of great extent, where the hernia is large; in these latter cases, Sir A. Cooper's practice of dividing the stricture, which is, for the most part, external to the sac, and leaving the latter unopened and the hernia unreduced, is the best practice. The whole history of herniotomy, as epitomised in this paper, tends to the conclusion that, as respects the mode of proceeding on opening the sac, "to follow one method indiscriminately in all cases would be unwise," and that intra- and extra-peritoneal division should be resorted to, according to the particular circumstances of the case; that, in a majority of cases, the former is not only the more suitable mode, but the only one which is safe, or by which any good can be effected, and that the cases in which the latter is suitable, are those of very short standing, when there is no reason to apprehend the existence of adhesions, or of an unsound condition of the hernia, and cases of large and old hernia, where the more judicious proceeding is to divide the stricture, and not to attempt reduction. A recapitulation of the history of opinions respecting the plan of not opening the sac is given, including the names of Franco, Paré, Petit, Garengeot, Bonnet of Lyons, Monro Secundus,

* Archivo de la Medicina Espanola y extrangera.

† Prov. Med. and Surg. Journal, Sept. 20, 1848, p. 512. ‡ Monthly Journal, May 1848.

Sir A. Cooper, Mr. Lawrence, Mr. Key, Mr. Luke, and Mr. Liston, from which it appears that this mode is meeting with deservedly increased favour; and Dr. Pirrie remarks, that he has no doubt that it will continue to do so, if practised under the prescribed limitations. Dr. Pirrie, with all judicious surgeons of the present day, attaches the greatest importance to the operation for hernia being performed early; his decided impression is, that the reason why it is so frequently followed by death, instead of being one of the most successful of the great operations of surgery, is "*too great delay* in resorting to an operation, and the *undue and injurious use of the taxis.*"

—Dr. James Duncan, of the Royal Infirmary, Edinburgh, has also furnished a communication in favour of dividing the stricture external to the sac, illustrated by cases. Dr. Duncan remarks, in reference to the existence of the stricture at the neck of the sac, this circumstance cannot be ascertained before the operation, and when it is found there, on operating, the sac may then be opened, and the process completed in the ordinary way, the patient being none the worse for the attempt; for when the stricture is in the sac it is impossible to perform the operation of extra-peritoneal incision. Dr. Duncan admits the most serious objection to be the danger of returning the bowel, or omentum, in a state of gangrene; and that whenever there is reason to suspect this, it is the clear duty of the surgeon to proceed in the ordinary way.*

—Mr. Luke has recently published a most interesting and important paper on the same subject, in which the bearings of the question are further elucidated; some of the most forcible objections which have been made to Petit's operation are materially qualified, and the considerations and statistics embraced by the paper are favorable to the general adoption of the operation without opening the sac.†

21. Injuries and Diseases of the Urino-Genital System.—*Strictures of the Urethra.*—An article on the formation of organic stricture in the male urethra, with some remarks on their consequences and treatment, will be found in the Dublin Quarterly,‡ by Dr. Wilmot. This gentleman states that, in gleety discharges, occurring in the early stage of stricture, he never thinks of prescribing medicine with the expectation of curing the discharge, he passes a plaster boujie, and in general finds a sensitive part, at or near which spot a soft obstruction can be frequently felt, which appears little, if any, impediment to the passage of the instrument; by continuing the use of the bougie every second or third day for some time, the morbid sensibility of the part will be removed, the gleety discharge will cease, and the pulpy obstruction, and all the other thickening will disappear, leaving the urethra free; in such cases it is necessary to pass the bougie for some time after all the symptoms have declined. To prevent relapses in strictures, for all are liable to return after a time, the occasional application of instruments is absolutely necessary for a long while. Dr. Wilmot has found, in his own practice, use for almost all the instruments which have from time to time been invented for the removal of strictures. The plaster bougie is a great favorite with him, it is applicable in recent stricture, and he has succeeded with it in those which are seated either at or behind the bulb. The gum-elastic catheter, the catgut bougie, and the metallic catheter and sound have all their special uses, which are in part explained and illustrated in this paper by plates. In cases of stricture, in which there is a predisposition to rigor, Dr. Wilmot advocates resort to a large dose of opium before the instrument is used. This gentleman states, also, that he has effected some cures of impassable strictures by a tolerably large gum-

* Monthly Journal, March 1848, p. 633. † Medico-Chirur. Trans., vol. xxxi, p. 101.
‡ May 1, 1848, p. 297, et passim.

elastic catheter, or bougie, pressed against the stricture for fifteen or twenty minutes every second day. Dr. Wilmot also urges the necessity of hygienic treatment during the local treatment of strictures.

We have introduced some remarks by Mr. Vincent on the treatment of the irritable stricture of the urethra. (Ext. art. 61, p. 155.)

22. *Catheterism.*—Mr W. N. Sprong suggests the use of a common syringe to obviate the clogging of the aperture of a catheter during its introduction into the bladder; the pipe to be introduced into the orifice, and the blood to be drawn into the cylinder of the catheter by working the piston briskly, upon which the urine will flow.*

23. *Vesico-vaginal Fistula.*—A case is recorded in which the bladder protruded into the vagina, and was mistaken by a medical practitioner for a prolapsus uteri. A pessary was actually forced through the vagina into the bladder, and remained there five months, producing the most violent symptoms; it was ultimately extracted, with the greatest difficulty, through the fistula.† Had the practitioner taken care, on the reduction of the tumour, to explore the neck of the uterus, he would not have committed this error of diagnosis, and many of the poor woman's sufferings would have been prevented.

24. *Urinary Calculus.*—Mr. Bullen extracted from a girl, æt. 14, a calculus comprised of oxalate of lime, with a nucleus of uric acid; the calculus was the size of a swan's egg, measuring around its largest circumference eight inches and a half, and weighing seven ounces. The mass was broken into many pieces, but with some little difficulty; the whole of the fragments were extracted, and the patient appeared to be doing well.‡

Mr. Bullen inquires if there be a similar case on record in one so young; he is inclined to consider it unique in the annals of surgery. When we read of a stone weighing 32 ounces,§ another weighing 2 lbs. 3 oz. 6 dr.,‖ another 3 lbs. 3 oz., extracted after death,¶ and another, removed from the body of a woman at Norwich, almost as large as a new-born child's head,** there is certainly nothing remarkable in the size. From the ages of some of the individuals in whose bladders such enormous calculi have been met with, there can be no room to doubt that, at the age of 14, they must have been as large as the one described by Mr. Bullen, but we have no note before us of a calculus having been *extracted* so large as that in one so young.

25. Injuries and Diseases of the Bones and Ligaments.—The surgical reader will find the following articles, and the extracts to which they refer, replete with interest:—*Excision of the Head of the Femur.* Our extracts contain a valuable paper (62, p. 157) upon this subject, by Mr. H. Smith. The operation was first proposed by Mr. Charles White, and first performed in this country by Mr. Anthony White. Mr. Fergusson recalled the attention of the profession to it more recently, by resorting to it in the case described in the extract referred to. Mr. Smith urges very strong arguments in its favour, he considers it an operation fraught with the greatest benefit to suffering humanity, and calculated to elevate the "science" of surgery. At the same time, he admits that it is one requiring great care in the selection of cases, and by no means to be resorted to indiscriminately. Mr. Smith's essay has called forth 'Remarks on the Operation for Excising part of the

* Lancet, June 9, 1848. † Annales des Thérapeutiques, Feb. 1848, p. 425.
‡ Prov. Med. and Surg. Journal, May 1848. § Philosophical Trans., vol. xi, p. 843.
‖ Idem, vol. xv, p. 1015. ¶ Id. vol. xix, p. 310. ** Id. vol. ii, p. 402.

Hip-joint in Scrofulous Caries of the Articulation,' from Mr. H. B. Norman.* The latter gentleman states truly, that there is no great difficulty nor danger in the performance of these operations, but that great caution is necessary. He considers that there are circumstances at the present moment which render it peculiarly incumbent upon surgeons not to be hurried away too rapidly after "novelties or revived antiquities," alluding, we presume, to the facilities afforded for operation by the discovery of the agency of chloroform. Mr. Norman urges on our consideration the constitutional character of the disease, which may be regarded as a local manifestation of scrofulous cachexia. He considers the frequent coincidence of these local affections with visceral disease as the most serious objection to the proposed operation. It would be a poor satisfaction, he remarks, after excising the head of the femur, and scraping away at a carious acetabulum, to see our patient dying of phthisis; the reply to which objection will unquestionably be, that physical diagnosis will not permit a surgeon of the present day to commit the oversights and errors of the past. Another serious objection, in Mr. Norman's mind, is the frequent impossibility of forming even a rational opinion of the extent of the disease; the acetabulum may be destroyed, and the cavity of the joint may communicate with large pelvic and lumbar abscesses. Nevertheless, Mr. Norman does not object to the operation in well-selected cases.

Mr. Fergusson operates by a straight incision on the outside of the thigh, and this is the only mode referred to in the above papers. Chelius describes three methods: 1st. A simple longitudinal incision. 2d. The formation of a flap, which has been resorted to by Percy and Roux. 3d. Textor's oval cut.† The latter consists in an incision beginning two inches above the great trochanter, carried obliquely backwards and outwards, and ending about an inch before the little trochanter; to this follows a second incision, beginning on the front of the thigh opposite the point where the former ended, carried obliquely outwards and upwards, and meeting it at rather an acute angle above the great trochanter.

26. *Excision of the Trochanter and Neck of the Femur.*—In Mr. Smith's essay, just referred to, we are also informed that within the last few weeks‡ an operation upon the hip, of an interesting character, has been performed by Mr. Fergusson, in King's College Hospital. The patient was a young woman, æt. 20, who had for sixteen years suffered from disease of the hip-joint. She had been under Mr. Fergusson's care for a few months. The symptoms indicated that disease of an incurable nature existed, and that, too, in the upper part of the femur alone. There had been an abscess of some duration, and a sinus led up towards the hip. The signs also were such as led the surgeon to suppose that dislocation had taken place. Mr. Fergusson, therefore, determined to cut down upon and remove the diseased portion of bone; in fact, his intention was to perform his operation of excision of the head of the femur. On making the incision, however, for this purpose, that gentleman discovered that he had been mistaken in his opinion about dislocation; none existed, but the head of the femur was firmly anchylosed to the acetabulum. He, however, found the source of the mischief in the neck of the bone; he, therefore, sawed through below the trochanter, and through the neck, taking the intermediate diseased parts away. The upper and back portion of the neck was perforated by a round hole, through which was seen a portion of bone, nearly loose, in a necrosed condition; the disease slightly encroached upon the trochanter.

Thus this operation, strictly speaking, was excision of the trochanter and

* Lancet, July 8, 1848. † System of Surgery, vol. ii, p. 977. ‡ Lancet, April 15, 1848.

neck of the femur. It may be likened to a proceeding which has been put in force by Barton, of Philadelphia; and more lately by M. Maisonneuve, at the Bicêtre. (Medico-Chirurgical Journal of Paris, Jan. 1848.) In both these the femur was divided, in consequence of anchylosis, and the patients were much benefited. Mr. Fergusson did this, and also removed dead bone.

This patient was attacked with erysipelas in the wound; it extended over the hip and extremity, and, unfortunately, destroyed her sixteen days after the operation. At the post-mortem examination it was found that there was extensive suppuration in the cellular tissue in almost every part of the thigh, leg, and foot; the wound and extremity of the bone were in a condition similar to that in which the parts are found in a stump, when death occurs within the first twelve or eighteen days. There was no disease in the pelvis. Mr. Fergusson removed the great trochanter some time ago, in the case of a woman who had suffered severely from disease about the hip. All the symptoms indicated that the joint itself was sound, but that the trochanter was in a carious condition. He, therefore, made an incision over that process, and removed it. This case turned out very successfully.

27. *Anchylosis.*—In an article '*On the separate and combined Effects of the Cold Douche, and gradually increased motion, in the treatment of Incomplete Anchylosis,*'* Dr. L. Fleury arrives at the following conclusions. 1. In certain cases of incomplete anchylosis, in which forced motion is useless or hurtful, cold excitant douches are to be preferred to all other therapeutic agents, producing a very favorable effect, by rendering the capillary circulation and organic absorption more active, modifying the vitality of the tissues, and thus restoring the extra- and intra-articular parts to their physiological conditions. 2. In cases of incomplete anchylosis, which imperiously demand the application of active motion, but in which this is impracticable, owing to the pains, articular irritation, and symptoms of general reaction which it provokes, cold sedative douches occasion these symptoms to subside, and allow the surgeon to have recourse to graduated motion better and sooner than any other known therapeutic agent. 3. In cases of incomplete anchylosis, demanding the application of forced motions, and where these are practicable, the cure is always quicker, and sometimes more complete, by associating the action of cold excitant douches with that of graduated motion.

The paper contains four cases illustrative of the author's principles. The first was a case of incomplete anchylosis of the shoulder-joint "of the first degree," from rheumatism. This was cured in two months, simply by a cold douche twice daily for about five minutes, consisting of a general shower-bath, and a local energetic douche, three centimetres in diameter, directed on the shoulder-joint. The second was a case of enlarged and stiff knee, the result of rheumatism; it presented the appearance of a white swelling, the limb being emaciated above and below the joint, which was flexed at an angle of about 140°; the condyles of the femur were enlarged. A cure of this case was obtained in about eight weeks, by the use of the douche twice a day for ten minutes. The third was a case of partial anchylosis of the shoulder-joint, from an injury, which Professor Roux had pronounced an old anchylosis, that would probably continue for life. There was atrophy of the deltoid, and scarcely any motion in the joint. Douches, with forced motion of the joint gradually increased, produced a cure in ten weeks; the deltoid had recovered its volume and contractility, and the limb was capable of all the necessary movements. Shower-baths, as well as the local douches, were continually employed in this case. The case is given as illustrative, in the first place, of the utility of the sedative

* Archives Générales, July 1848, p. 317.

effects of cold water in allaying irritation and pain; and, secondly, of the excitant effects of the same element applied as a douche, by which it becomes a powerful adjuvant of the motor powers, modifying the vitality of the muscular and fibrous tissues. In the fourth case, which we have condensed and introduced into our extracts (art. 63), the efficacy of the treatment is illustrated still more remarkably.

28. *The Treatment of Ununited Fractures.*—We have recently placed before our readers several new proposals for the management of these cases.* Dr. Miller has suggested that the principle of "subcutaneous incision" may be made available,† and he quotes from Andral as follows:—That a strong needle, having been passed obliquely down to the part, should have its edge freely moved about in all directions, so as to cut up the ligamentous bond of union, as well as the dense investment of the ends of the bones, the needle being then carefully withdrawn, and the puncture covered by isinglass plaster. The parts will probably be reduced to a state very similar to what attends an ordinary fracture. At the first, a pouch of blood will form; the blood will be absorbed; fibrin will take its place; inflammation being absent, the plasma will become organized, and probably form an excellent imitation of the ordinary provisional callus; while, at the same time, secretion and organization may advance from the ends of the bone; and consolidation, as by definitive callus, be completed.

The connecting materials of the "false joint" are disrupted and excited, not destroyed. They are valuable towards the formation of bone, when brought into and maintained in a state of moderate vascular excitement. A state of active hyperæmia generally precedes the osseous transformation of the fibrous, cartilaginous, and fibro-cartilaginous tissues. M. Rayer observed that, when he excited an artificial irritation in the fibro-cartilage of a rabbit's ear, the part was at first softened; a yellow matter was next deposited in its texture; and, finally, a calcareous deposit was formed, and a true ossification produced. M. Cruveilhier likewise observed different portions of periosteum, ligaments, and cartilages pass into the osseous or ossiform state, under the influence of different stimulating applications.‡

—Five cases of ununited fracture, treated successfully by Mr. W. B. Page, according to different methods, were detailed to the Medico-Chirurgical Society of London in March last.§ Mr. Page remarks that in no class of cases is a correct appreciation of the causes of the malady of more importance than in these. The non-union may depend upon a purely local or a general cause, and the treatment must be varied accordingly.

While the present sheet was in the press, we received a specimen of Plates on Surgical Anatomy, by Mr. Maclise; we beg to call the reader's attention to them, not less for their fidelity than for a lowness of price (5*s.* per number) which brings the work within the means, we trust, of the majority of the profession.

* Half-Yearly Abstract, Vol. VII, p. 119; idem, p. 268. † Monthly Journal, June 1848, p. 843.
‡ Archives Générales, Avril 1848, p. 480. § Transactions, vol. xxxi, p. 135.

III.

REPORT ON THE PROGRESS OF MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

BY THE EDITOR.

Among the works recently published in connexion with the subject of the present Report, we have to notice a volume, entitled 'Females and their Diseases,' by Dr. Meigs, of Philadelphia; a third edition of Dr. Ashwell's 'Practical Treatise on the Diseases of Females;' a second edition of Dr. Lee's 'Clinical Midwifery;' and a second edition of Dr. Rigby's 'Memoranda for Young Practitioners in Midwifery.'

—The work of Dr. Meigs, which purports to be a series of familiar letters to his pupils, is destitute of any regular arrangement which would entitle it to be regarded as a treatise on the diseases of females, but is made up of clinical remarks on some of the more frequent or more important of those diseases selected from the vast field of female pathology. As regards style, it is not in our power to say much in commendation; there is a mixture of gossiping colloquiality with pedantic verbiage, which is ill suited to the composition of a scientific work. Setting aside these faults, however, we are bound to state that every chapter is replete with practical instruction, and bears the impress of being the composition of an acute and experienced mind. There is a terseness, and at the same time an accuracy, in his description of symptoms, and in the rules for diagnosis, which cannot fail to recommend the volume to the attention of the reader.

The work consists of forty-four letters, of the most important of which we shall proceed to give a brief account. In the third letter, the author enters upon the discussion of the peculiarities of the sex, asserting that, as the ovary is the great characteristic organ of the female, and as the active tissue of the ovary is that which Von Baer calls the stroma, that therefore *stroma is sex*. He then gives a minute anatomical description of the ovum and its constituent parts, which differs but little from the views entertained by Bischoff, Valentin, and others, a full account of which will be found in our former Reports on Anatomy and Physiology. After, in a subsequent letter, pronouncing a highflown but well-deserved eulogium on the female sex, he procceds, in Letter 5, to an account of their diseases.

The first subject noticed is relaxed symphysis pubis, which he regards as a strictly pathological state, in opposition to the opinion of Moreau. The cure is rest. He also here introduces incidentally the value of setons of the mons veneris in affections of the bladder. The subjects next mentioned are œdema, rupture, warts, &c. of the labia, and cohesion of the nymphæ, none of which require special mention.

In subsequent letters the author discourses upon the diseases of the vagina. In speaking of narrowing and obliteration of this canal, he alludes, as a frequent cause, to a species of ulceration which is apt to supervene upon childbirth, and which is extensive, and seldom heals without inducing great contraction. He describes a case, the cicatrization of which reduced the upper part of the vagina to the dimensions of a crow-quill. Under the head of diseases of the clitoris, the author alludes to a very remarkable case, also published in Dr. Ashwell's second edition, in which this organ arrived at an enormous size, and consisted of cysts containing fluid resembling tar.

The author's remarks on displacements of the womb are chiefly confined to prolapsus, retro- and ante-version, and inversion. Retroflexion is dismissed in a few words. He has met with one specimen of flexion at the junction of the fundus with the cervix, but with several in which the flexion occurred in the cervix itself. He does not admit of any general signs leading to its diagnosis, and makes no allusion to the uterine sound of Dr. Simpson.

The remainder of the diseases of the womb noticed by the author are polypus, in Letters 19 and 20, cancer of the womb, physometra, and hydatids. Cancer, Dr. Meigs believes to originate in chronic inflammation. His suggestions for its relief are valuable, but not otherwise than usual. He speaks favorably of the actual cautery, so much employed by M. Jobert. There are many cases of hard and hypertrophied os and cervix which are mistaken for cancerous deposit: his treatment of them is bleeding, rest, nitrate of silver locally, and the bichloride of mercury in sarsaparilla, which is also much relied upon by Dr. Oldham.

The existence of physometra as a disease is denied; but the presence of air in the uterine cavity is, in accordance with general experience, admitted. Much the same opinion is expressed by Dr. Ashwell (p. 523). The latter regards the presence of air as produced by decomposition of the retained secretions, placenta, &c. Dr. Meigs believes that the uterus is often filled with air by suction, a vacuum being formed as the womb dilates, and rises into the abdomen after its contraction, subsequent to the expulsion of the child.

The remainder of the volume is taken up with the diseases of the ovaries, menstruation, hysteria, and the diseases of pregnancy, puerperal fever, phlegmasia dolens, puerperal convulsions, &c. The author's remarks on these subjects, where worthy of mention, will be given in a future section of this Report.

— Of the 'Practical Treatise on the Diseases of Females,' by Dr. Ashwell, the profession has long since pronounced its opinion, and that it is a favorable one is sufficiently evident from the fact that a third edition has been called for. Without enumerating the specific subjects on which additions and improvements have been made subsequent to the last publication, we may state, in general terms, that great pains appear to have been taken to embrace everything in the progress of the department to which the work belongs that can be made available at the bedside. We shall notice some of these subjects more in detail as we proceed.

— Dr. Lee's useful text-book, 'Clinical Midwifery,' has reached a second edition, No alteration appears to have been made in its arrangement beyond the introduction of the reports of 145 additional cases of difficult preternatural and complicated labours.

— Dr. Rigby's 'Memoranda' are, as might be expected from its author's reputation, sound and good, and may occasionally prove of service; but we consider that the man whose memory is in so feeble a condition as to require this condensed nutriment has no business to be at the bedside of a parturient female.

§ 1.—*Anæsthesia in Midwifery.*

1. *Religious Objections.*—Since our last Report, Dr. Prothcroe Smith* and Mr. Bainbrigge† have each published a pamphlet, pointing out the absurdity

* Scriptural Authority for the Mitigation of the Pains of Labour. London, 1848, p. 52.
† Remarks on Chloroform in Alleviating Human Suffering. London, 1848, p. 40.

of the objections made to the use of chloroform in midwifery, upon religious grounds. As far as their main arguments are concerned, both these writers rely upon the philological interpretation of the word erroneously translated "sorrow;" but as they add nothing on this point to the information so learnedly adduced in Professor Simpson's pamphlet, previously noticed (see Half-Yearly Abstract, Vol. VII, p. 305), we do not feel ourselves called upon to enlarge upon the subject in the present Report. Both pamphlets are written in a tone of religious feeling, for which an unthinking public are not apt to give our profession credit, and will, doubtless, each assist to complete the demolition of these untenable prejudices, so ably commenced by Dr. Simpson.

2. *General Objections.*—In a pamphlet entitled 'Arguments against the indiscriminate use of Chloroform in Midwifery,' Dr. William Merriman has endeavoured to inculcate a more moderate confidence in the utility of that agent than is entertained by many. Although we believe that too much caution cannot be displayed in the use of an agent of such power, we nevertheless feel constrained to state that Dr. Merriman has not, in our belief, made out a strong case for its less frequent employment in midwifery.

The best answer, however, to the objection to chloroform of all denominations, is to be found in a recent 'Report on the Progress of Anæsthetic Midwifery,' by Professor Simpson,* of which we now proceed to give an analysis. In this important memoir, the author gives, first, a brief introduction of anæsthesia in midwifery, first as it was induced by ether, and subsequently by chloroform. He then lays before us the following record of the

3. *Results of Anæsthesia in Midwifery.*—Up to the present time Dr. Simpson has, in his own practice, delivered 150 patients in a state of anæsthesia, with the following results:

To children.—All the children were born alive except one, which was expelled dead and decomposed, prematurely. Subsequently one other died, with symptoms of cyanosis. Of the remainder, not one has, up to this time (October), shown symptoms of any of the cerebral affections which were rather too freely prognosticated.

To mothers.—In all cases the physical sufferings attendant upon the latter stages have been alleviated or abolished. With one exception, since he has used chloroform, none of the patients have been aware of the last throes. With ether the results were not always so satisfactory. In addition to this direct advantage, that of relieving the anxiety caused by anticipated suffering, with its consequent depressing effects, has been often observed. In most cases the mothers, on waking from the anæsthetic sleep, have expressed surprise at their feelings of strength, contrasted with their former experience; and in Dr. Simpson's experience, by annulling the parturient *shock*, the chances of secondary vascular excitements have been diminished. His firm conviction is, that, since he has employed chloroform, he has seen more rapid recoveries, and fewer puerperal complications. Two patients died of puerperal fever, but this happened during an epidemic, which also destroyed numbers who had not been under anæsthetic influence.

In addition to the 150 cases which occurred in Dr. Simpson's own practice, he has witnessed a large number in hospital and consultation practice, as well as in various obstetrical operations, as turning, craniotomy, and the forceps. In all such, the superinduction of anæsthesia has appeared to him of positive benefit; for not only is the mother passive and motionless, but the dilatation of the passages is more facile, and the extraction of the fœtus consequently more readily accomplished.

* Monthly Journal, Oct. 1848.

In confirmation of his opinions as to the safety and value of chloroform in midwifery, Dr. Simpson has been at the pains of collecting testimony from various sources.

Thus, in the Maternity Hospital of Edinburgh, according to the report of Drs. Duncan and Norris, 95 women have been delivered under its influence, of which 88 were natural, and 7 morbid labours. In the 88 cases, one only died, convulsions coming on after delivery, and proving fatal after six days; she was the subject of fatty kidney. There were 5 still-born children, 2 of which were premature; the proportion being thus 1 in 17. In the Dublin Hospital, the proportion is 1 in 15. Of the 7 morbid labours, there were 1, short forceps—child dead, mother recovered; 2, long forceps—1 mother dead from sloughing of the passages, both children living; 4 cases of turning—1 dead from ruptured uterus, the others did well; 3 children still-born. The authors of the report further state that "they can confidently say that the recoveries have been more perfect and speedy than before. They have noticed an entire absence of languor, fatigue, and shivering. . . . . Further, there has been, since the introduction of chloroform, fewer than formerly of rigors, ephemeral fevers, &c.

—In the Westminster Lying-in Hospital, chloroform has been used by Dr. Haartman in twenty-five cases, mostly primiparæ. This gentleman found that, under the full effect of chloroform, the uterine contraction became less frequent, but became more so, though shortened in duration, as the effect passed off. He has never known the pains entirely to cease; the relaxation of the passages was not evident. The patients were generally entirely unconscious; but some knew what was going on, without feeling pain. The mothers all recovered speedily, with the exception of one, who, eight days after delivery, had symptoms of paralysis, which subsided in about a month. This writer did not observe any particular effect of the chloroform upon the children.

From private practitioners Dr. Simpson has received a large mass of favorable evidence.

Dr. Keith has used chloroform in twenty-four cases, keeping the patients under its influence from half an hour to eight hours. He states positively that he has seen "no serious symptom which could be traced to chloroform, either in the mother or child." The recoveries have been good, and the women have felt decidedly stronger than on former occasions.

Dr. Moir has never met with a single case where unpleasant effects, either to mother or child, could be traced to its use. He thinks that the second stage of labour is much accelerated by the relaxation of the perineal tissues.

Dr. Malcolm, Edinburgh, has employed chloroform in thirty cases of labour with satisfactory results. He has kept patients under its influence for six hours, without any unpleasant effects. The mothers have all made rapid recoveries, which is the more remarkable, as most of the cases were primiparæ. He has in general employed about an ounce of chloroform per hour; he has never seen uterine contractions arrested.

Dr. Thompson, Edinburgh. Experience analogous to that of Dr. Simpson; considers the relaxing effects upon the soft parts undeniable.

Mr. Carmichael, Edinburgh, has exhibited it in twenty-six cases. Recoveries unusually speedy; has heard monthly nurses complain that, by expediting convalescence, it will diminish their profits. All the children alive, and doing well.

Dr. Purdie, Edinburgh, has given it in seventeen cases; is confident that it shortens the duration of labour.

Dr. Cumming, Edinburgh. Experience in thirty-five cases. All have recovered unusually well. Two cases had flooded severely in former labours; but

had no hemorrhage after the chloroform. All the children born alive; none have suffered from the use of this agent. "In short, I am compelled to say, that all my cases have been so successful, &c., ... that if there be any sin connected with chloroform, it is chargeable on those who refuse to administer it."

Mr. Stallard, Leicester, in thirty cases, has had no flooding, though two of the patients were never free from it in former labours; is of opinion that chloroform exerts no perceptible influence on the child.

Dr. Protheroe Smith has records of 125 cases of labour, in which chloroform has been used; all of which, with one exception, have done well. In several there was no flooding, though previously hemorrhage had ensued. In nearly all, the getting up has been more speedy, requiring no opiates or purgatives. He has kept patients under its influence from half an hour to twenty-eight hours.

Mr. Lansdown, Bristol, has given chloroform in twenty-six cases. He believes that it may be given with impunity as early in labour as we please, the only objection being the expense of material. The greatest length of time he has employed it is sixteen hours and a half. Most of the patients recovered rapidly. Mr. Lansdown finds no difference as to expulsion of the placenta, and the subsequent discharge.

The above quotations, from a numerous correspondence of Dr. Simpson's, sufficiently show the safety and advantage of chloroform in human parturition. Evidence of a similar tendency is also furnished by Mr. Ceely, of Aylesbury; Dr. Krieger, of Berlin; Dr. Rigby; Mr. Spencer, Isle of Man; Dr. Paton, Dundee; Dr. Dyce, Aberdeen.

4. *Mode of Exhibition, Dose, &c.*—In the same report, Dr. Simpson exhibits his method of using chloroform. Occasionally, in the early stages of labour, he has given it in small doses, so as to obtund sensibility without destroying consciousness; but this plan, as a general rule, appears to be injudicious, and, upon the whole, he prefers to induce a deeper anæsthesia. In this case, the uterine contractions are occasionally suspended; but they are resumed on withdrawing the chloroform. When this is the case, a few inhalations repeated with each uterine contraction will keep the patient sufficiently unconscious; and this may be maintained for hours. The amount of unconsciousness which may be exactly necessary, and not too great, is, observes Dr. Simpson, only to be known by experience.

At the latter stage of labour, when the head is passing, the anæsthesia requires to be deeper; and the relaxation of the soft parts induced by this is observed to accelerate the extrusion of the child. In obstetric operations, the unconsciousness must be as complete as in surgical operations.

Dr. Simpson further remarks, that the degree and depth of anæsthesia which different patients are capable of enduring without interfering with the parturient act varies with the individual. In administering chloroform he always prefers the handkerchief. The quantity he pours on at first is usually three or four drachms. He takes care that plenty of air is admitted. The time at which he generally commences its use is towards the commencement of the second stage of labour; but if the pains are severe, he begins with it earlier.

In the latter pages of the report Dr. Simpson reconsiders the objections religious and general.

§ II.—*Diseases of Women Unconnected with Pregnancy.*

5. *The Relations between Functional Derangements of the Liver and Uterus.*—Dr. Butler Lane has published a very useful pamphlet, pointing out more

distinctly than has been usually done the sympathetic relations existing between the liver and uterus, both in health and in disease. Although this relation has not, perhaps, been sufficiently insisted upon, *totidem verbis*, it has, nevertheless, been pretty generally acknowledged by the profession in practice. It is impossible, in fact, for any one not to have observed the evident connexion between *alvine* and *uterine* derangement, and considering how materially the condition of the intestines is dependent upon the due elaboration and excretions of the bile, the part taken by the liver in this chain of sympathy is sufficiently obvious. Dr. Lane was more particularly induced to study this subject, during his researches on oxide of silver in uterine affections. One of those in which he derived most benefit from the medicine is menorrhagia; but he found that there was one form of this disease which resisted the oxide, but speedily subsided under the use of mercurial alteratives. Reflecting upon this, he came to the conclusion that in these instances a congested state of liver existed. The relief of which caused the expulsion of the menorrhagic discharge.

In support of his views, Dr. Lane adduces observations respecting the relative weight of the liver and the whole body, in females at various epochs of life, and further remarks upon the fact that menstruation rarely occurs without concomitant alvine derangement. His opinions also derive support from the action of medicine in chlorosis, from the occurrence of hepatic disturbance in dysmenorrhœa, at the cessation of the menses, and in pregnancy. The pamphlet concludes with several well-selected illustrative cases.*

6. *Strumous Disease of the Uterus.*—Dr. Lever records the case of a woman, æt. 58, who, some time before death, complained of irregularity in the action of the bowels, with a feeling of bearing down, and pain over the hypogastric region. On examination, per vaginam, the body of the uterus was found to be enlarged, and pressing backwards upon the rectum. On a post-mortem examination, a small tumour was found in the right breast. A large tumour was situated between the uterus and rectum, and pointing towards the feet. Internally it was a light yellow colour, deepening into a reddish hue towards the circumference. The uterus itself was large, having several irregular elevations on its surface. The parietes were thick and dark-coloured. When the organ was squeezed, a curdy matter escaped through the os.†

7. *Rupture of the Unimpregnated Uterus.*—M. Gozzo, of Naples, records the following extraordinary case. A woman, æt. 34, the subject of dysmenorrhœa, and sterile, was examined. The uterus was felt above the pubis, as large as at the fifth month, but perfectly destitute of inequalities of its surface. The uterus continued to increase until its fundus reached the xiphoid cartilage; the menstrual discharge was irregular, and followed by leucorrhœa. She was shortly seized with symptoms of intestinal obstruction, from which she was recovering, when she was suddenly seized with collapse and abdominal pain, and died in less than twenty-four hours. After death the peritoneal cavity was found to be almost filled with pus, mingled with serous fluid and fetid gas. The uterus adhered to the lateral parts of the abdomen, from the pubis as high as the umbilicus, filling the iliac regions; it was covered by the large omentum. The intestinal surface was irregular, and covered with fungous excrescences and tubercular masses of various sizes and forms, its cavity being filled with a white inodorous pus. The uterine walls were thickened, and con-

* On Functional Derangement of the Liver, associated with Uterine Derangement, &c. p. 32.

† Medical Gazette, April 14, 1848.

tained several small abscesses, some of which were close to its peritoneal surface. The posterior aspect of the organ exhibited a rent, threugh which the matter had escaped into the abdomen.*

8. *Prolapsus Uteri.*—Dr. Meigs considers the distress of females suffering under prolapsus uteri as belonging to the class of neuralgic disorders, and has met with many cases of severe neuralgia of the abdominal regions, which had no other origin. He gives one remarkable instance, which will be found in a previous page (Abstract, p. 190), in which the neuralgic tenderness simulated acute peritonitis. He criticises the opinion advanced by Dr. Bennet and others, that prolapsus is often preceded and induced by engorgement of the os and cervix, disbelieving that the addition of an ounce to the weight of the organ can cause its descent, when it does not prolapse in many cases of uterine tumour and in pregnancy.

In the treatment of prolapsus uteri, Dr. Meigs has great reliance on the pessary, therein differing from many recent writers. Dr. Ashwell, also (p. 575), expresses his conviction that a cure may frequently be effected by their use alone. The ill effects which have occasionally been recorded are regarded by both to have been due to improper shape and adjustment of the instrument, and want of cleansing it. Of Dr. Hull's abdominal supporter Dr. Meigs speaks with great contempt. After a certain amount of benefit has been derived from the use of the pessary, the relaxed tissues of the vagina may be greatly strengthened, and the tendency to relapse prevented by the medicated "sachet" mentioned in a former page† (p. 210.)

9. *Retroversion—Retroflexion.*—We have already remarked that Dr. Meigs makes but little allusion to the existence of retroflexion of the womb; Dr. Ashwell also devotes but little space to this displacement, having apparently, in a long experience, met with only two well-marked cases. He contents himself with stating, in general terms, that retroflexion and retroversion differ only in degree, and that these symptoms are, therefore, in a great measure the same.‡

—Dr. Oldham, in an essay which is too important to be treated briefly, and which we shall, therefore, postpone to our next Volume, is disposed to deny its existence altogether. The only approach to it which he has been able to meet with has been a particular form of retroversion which he describes, and in which the posterior wall of the uterus is much hypertrophied, and by its circumscribed enlargement accurately simulates a deflected fundus.

—In alluding to the more recent recommendations for the mechanical treatment of retroflexion, Dr. Ashwell passes a somewhat strong censure on the instruments employed. He observes, "I cannot avoid thinking that the uterine sound not only detects but makes many of the supposed displacements. All practical men know that the uterus varies naturally in position, in its degrees of mobility and immobility, and in the influence exerted upon it by a loaded or empty rectum or bladder; and it must be kept in view that the curve of this steel bougie may not be the curve of the uterus; and if, therefore, it is to be introduced at all (and I wish it were less frequently so), the normal position of the organ thus spiked must be made to follow the curve of the instrument, entering, and thus unnecessarily intruding upon its cavity." Of the uterine supporter he speaks in still more unfavorable terms.§

For further information on these displacements, and their treatment, we refer the reader to Arts. 67, 68.

[In regard to the uterine sound and supporter, we feel bound to state that

* Archives Générales, xviii, 104. † Op. cit. 177. ‡ Op. cit. 626. § Op. cit. 636.

we have, on several occasions, conversed privately with parties in the habit of using them, and that they have each expressed the opinion that much caution is necessary in their employment, and that serious results have followed their introduction, of which the medical world knows nothing.]

10. *Ulceration of the Os and Cervix Uteri.*—Dr Mitchell recommends the application of the ethereal solution of gun-cotton to the ulcer, which must be previously wiped dry. Several coatings are given by means of a camel's hair brush, each being allowed to dry before the next is applied. The author states that he has now given it a fair and impartial trial, and has no hesitation in recommending it as a most useful remedy.*

11. *Excision of the Cervix for Carcinoma.*—A case of this operation is narrated by Mr. Atlee. The wound healed after the repeated use of caustic, but the patient died shortly after.†

—A case of excision of the anterior lip of the os uteri, by Dr. Clay, will be found among our extracts. (See art. 71.)

12. *Diseases of the Vagina—Fibrous Tumour.*—Mr. Curling removed a tumour of this nature, which had grown to the upper part of the vagina by a broad pedicle. Considerable hemorrhage followed its excision, which was checked by plugging the vagina.‡

13. *Diseases of the Uterine Appendages—Ovariotomy.*—Three additional cases of this operation have recently been recorded; two fatal, the other successful.

Of the fatal cases, in the first narrated by Mr. Potter, it was found, on opening the abdomen, that adhesions previously unsuspected existed; the cause of death was peritonitis.§

In the second, related by Mr. Arnott, the removal of a multilocular cyst was attempted by the small incision. Adhesions to such an extent were found, that the operation was not completed. The unfortunate patient died in seventy-four hours.‖ Dr. Clay, in alluding to this case, attributes the failure to the employment of the small incision.

The successful case appears in the 'Journal des Sciences Médico-Chirurgicales.' The patient, æt. 25, had been in health till 1842, when symptoms of ovarian dropsy showed themselves. She was tapped, for the first time, in May 1844, and the operation was subsequently repeated fifty times! Ovariotomy was performed on the 15th September, 1847. The patient, having inhaled ether, an incision three inches in length was made to the left side, and parallel to the linea alba. The sac was punctured, and the excision then extended to seven inches. The tumour was then laid open more freely, and its contents, which were of a mixed serous and puriform character, discharged. The pedicle, which was on the left side, was pierced by a needle armed with a double ligature, was then excised, after being tied on either side. The tumour weighed nine pounds, and was made up of cartilaginous, gelatinous, and cerebriform matter. The patient was convalescent at the end of a month.

—Dr. Clay is engaged in the publication of a history of ovariotomy, which, when completed, will give much assistance in placing the value of the operation on a proper basis.¶

—Respecting the feasibility of the operation itself, it may be stated that both Dr. Meigs and Dr. Ashwell express themselves unhesitatingly as opponents, both writers basing their objections upon the overpowering statistical evidence against it, adduced by Mr. Phillips, Mr. Safford Lee, &c. This evidence, having been given in a former Volume, it is unnecessary to reprint.

* Dublin Medical Press, Oct. 4, 1848. † Amer. Journ. of the Med. Sciences, July 1848. ‡ Med. Gaz., March 3, 1848. § Ibid. June 23. ‖ Med. Gaz., and Obstetric Record, No. 12. ¶ British Record of Obstetrical Science.

14. *Treatment of Ovarian Dropsy.*—In a valuable series of papers, published in the 'Lancet,' Dr. Tilt has passed in review the several methods of treating ovarian tumours, both medicinal and operative; the practical deductions from which may be thus summed up:

1st. Small and moderate-sized tumours may be cured by iodine and its preparations, given in large doses internally, as well as used externally, the contents of the cyst being absorbed by the cyst, or else voided by rectum or per vaginam.

2d. That tapping, employed as a palliative, and without any view towards a radical cure, should be deferred as long as possible, modern statistics having confirmed Morgagni's opinion of the danger of the operation.

3d. That when the cyst is voluminous, and felt bulging in the vagina, there is a sufficient number of successful cases to warrant the puncture of the cyst per vaginam, an India-rubber sound being left in the cavity of the cyst, and moderate pressure being made on the abdomen.

4th. That the rupture of monolocular ovarian cysts, with effusion of their contents into the peritoneal cavity, instead of being attended with alarming symptoms of peritonitis, is, generally speaking, unaccompanied by any formidable symptom whatever. Thus warranting the subcutaneous incision of the cyst.

5th. That the ulcerative opening of the cyst, after adhesion of its walls to the abdominal parietes (the new plan proposed by the author) is supported by the complete success in the case recorded, and by the success attending a somewhat similar treatment of hydatid cysts of the liver.

6th. That ovariotomy should be reserved for cases of multilocular ovarian cysts, and those cases of unilocular cysts with solid deposit.*

§ III.—*Pregnancy—Labour—The Puerperal State.*

15. *Signs of Pregnancy.*—In an essay recently published on the mammary secretion, Dr. Peddie insists upon the diagnostic importance of the presence in the breasts of a fluid containing milk-globules, as a sign of early pregnancy, and one in which almost implicit trust may be placed in a *first* conception. The fluid is described as serous and viscid, but under the microscope it exhibits milk-globules, agglomerated in masses together, with oil-globules and colostrum-granules. Beyond the limit of the first pregnancy, the author does not urge the value of the milk test, for when a woman has once suckled, the fluid is apt to linger in the breast a considerable time. Compared with the ordinarily recognised signs for distinguishing a first pregnancy from simple suppression of the menses, the author thinks that there is none to be compared with the milk test.†

16. *Early Pregnancy and Delivery of a Living Child.*—The following case, though far from unique, as regards the fact of impregnation, is remarkable, inasmuch as the infant was born living and healthy. The facts are as follow. At the Coventry Assizes, a girl aged twelve years and a half, in an advanced stage of pregnancy, preferred a charge of rape against her uncle. She continued in good health till delivery, which took place on the 16th September last. Mr. Smith, of Coventry, who furnishes the details of the case, attended her in labour, which was of unusually short duration. The subsequent symptoms were equally favorable; the lochia ceased after a few days, and the secretion of milk was so copious as to suggest to the mother the idea of seeking the place of wet-nurse. The infant, at birth, was long, slender, and emaciated,

* Lancet, Nov. 11, 1848. † Monthly Journal, August.

but subsequently improved in appearance. The mother began to menstruate at ten years old.*

17. *On the Laws which regulate the Duration of Utero-gestation.*—Dr. Clay has, for some years, been engaged in inquiries into the conditions which regulate the terms of utero-gestation, with the object of ascertaining the law by which its duration is governed. The results of these inquiries he has recently made public.

He determines, in the first place, that utero-gestation is, as to time, entirely a question of age, and that when this is known the term may be fixed with certainty. Within the last twenty-five years he has attended eleven cases of labour, four of which occurred below the age of fifteen years, seven under the sixteenth year. The term of impregnation was clearly made out in most of these cases, and in all the labour came on apparently at the full period of pregnancy. In fine, the gestation did not exceed 267 days. In two the dates could not be depended upon. The remaining four continued beyond the time calculated for their ages, but the discrepancy is accounted for on another ground, which Dr. Clay subsequently notices. He also has attended two labours at the age of fifty-two, in both of which the date of impregnation wae correctly ascertained; in these the gestation lasted 290 days. In two cases, one æt. twenty-five, the pregnancy was 274 days, and in another, æt. thirty-five, it was 278 days.

The influence of the age of the female on the period of gestation in the lower animals, as is also its dependence on the age of the sire, appears to be well known to cattle-breeders, and a paper on the subject appeared some time back in an American medical journal, which also gave the result of experiments on the human female. Dr. Clay has compared them with his own observations, and has made out the following table of the duration of pregnancy at the several ages below asserted:

Years.	Days.
15½	267
17	270
19	272
25	274
30	276
35	278
44	284
52	290

This table shows plainly that gestation is prolonged in ratio with the age of the female, but, as Dr. Clay candidly admits, further experience is required to invest the observations with the whole force of truth.

The other law alluded to as influencing the duration of gestation is, that it depends upon the age of the father as well as of the mother. Dr. Clay states that his attention was first directed to this point by the four cases of early pregnancy above mentioned, which he observed to extend over a longer period than their ages would *per se* have warranted. It is remarkable that each of these was *impregnated by a man much older than herself.* This led him to strike an average of the ages of both parents as the rule whence to judge of the duration of the pregnancy; and to anticipate that a longer term of gestation may be expected when a young female is impregnated by an elderly male, than would be calculated from *her* age; and *vice versâ* that a shorter period would be observed than is natural to her age, when an elderly female is impregnated by a young man.†

* Medical Gazette, Nov. 4, 1848.

† Obstetric Record, No. 11, 1848.

These observations are very important, and though, without further confirmation, they cannot be implicitly received, they will doubtless have a due influence in modifying the authority of data arising out of loose calculations, based upon the last appearance of the menstrual discharge.

18. *The Periodoscope.*—In connexion with the subject of gestation, we take the opportunity of mentioning an ingenious instrument for the ready calculation of the periodical functions of the sex, invented by Dr. Tyler Smith, and named by him the Periodoscope. It consists of a moveable circular dial, upon which the months and days are engraved, fixed on a pivot in the centre of a large plate, upon which are numbered the different conditions of the reproductive system, as conception, abortion, premature labour, hemorrhage, labour, &c. By a knowledge of the date of conception, say November 14th, and fixing the moveable plate opposite to the point on the fixed plate which indicates *conception*, the observer is enabled at once to see that, allowing 280 days for gestation, labour may be expected about the 20th of August; he will also know the dates at which any of the accidents common to gestation may possibly occur, taking it for granted, that is to say, that Dr. Tyler Smith is correct in the statement that the ovarian or menstrual periods are the times at which abortion, hemorrhage, &c., are most likely to supervene. This dial is made in cardboard, and affixed to a small volume, in which its uses and applications are fully explained.*

19. *Prolonged Gestation.* — The following case of gestation, prolonged to probably 296, certainly to 293 days, occurred under the personal observation of Dr. M'Ilwain, by whom it is reported. The parties are of unexceptionable character, and the statement of the husband that no intercourse was had after the night of the 4th of July, may be implicitly relied on.

Mrs. ————, whose character is above suspicion, was visited on the evening of July 1st, 1847, by her husband, whose business had compelled him to reside for more than a year before in a distant state. The husband remained till the morning of the 6th of July, and then departed, and did not return for more than nine months. On the nights of the 1st, 2d, 3d, and 4th of July there was sexual intercourse between the parties, but none on the night of the 5th, or after. Shortly after Mrs. ———— considered herself pregnant, and on the 23d of April 1848, was delivered, after an easy labour, of a fine healthy female child, weighing nine pounds.

Supposing impregnation to have occurred on the night of the first, as a consequence of the first coition, the duration of the pregnancy must have been 296 days, but if we suppose the last copulation to be the one from which the pregnancy resulted, the period of gestation was 293 days.

This case is interesting, inasmuch as it furnishes conclusive evidence that gestation may be prolonged to thirteen, if not sixteen, days beyond the usual period.

The large size of the child—being a full pound and a half above the average weight of female children, is a circumstance in favour of its having been carried beyond the usual period.

The mother had borne three children previously, none of which weighed over eight pounds.

It is to be regretted that the age of neither party is mentioned.†

20. *Extra-uterine Fœtation.*—A case is related by Dr. Peters, of Missouri, the nature of which was not ascertained during life. The woman, who was not known to be pregnant, was suddenly seized with collapse and intense

* The Periodoscope. London, 1848. † Boston Med. and Surg. Journal, June 1848.

pain in the abdomen, and died in two hours. On examination, the cavity of the abdomen was found to contain fifteen pints of fluid blood. An embryo, with its membranes, was partly adhering to the upper anterior part of the bladder. The chorion, and amnion, and placenta, were distinctly seen. The embryo was three inches in length; all the external members were perfectly formed; it had one coil of the funis around its neck. The uterus was three times its natural size, and three fourths of an inch in thickness. The inner surface presented no appearance of a membrane lining it. The glandulæ Nabothi were slightly enlarged. The Fallopian tubes presented nothing unnatural, externally or internally. The orifices had the appearance, at the angles of the uterus, which they usually have in the unimpregnated state. The right ovarium was much larger than the left, and when cut into, one of the Graafian vesicles was seen to be enlarged, and filled with a brownish-coloured fluid.*

21. *Multiple Conceptions—Expulsion at different times.*—In our last Volume, page 320, we recorded some cases in which one fœtus was expelled and another retained for a longer or shorter period. It would seem that these instances, erroneously considered to be cases of superfœtation, are more common than is generally supposed, as we find six cases recorded by M. Brachet, in some of which the second fœtus was retained, and born alive at full term. M. Brachet also relates a remarkable instance in the rabbit, in which, after one congress with the male, two successive litters of seven were deposited, with an interval of 30 days. The fact of the single access of the male was here distinctly ascertained.†

—Dr. Samuel Merriman has republished a very remarkable case bearing on this subject, which, with some very apposite remarks, may be found in the 'Obstetrical Record,' No. 13, 1848.

22. *Dropsy in Pregnant Women.*—An elaborate memoir on this subject by MM. Regnault and Devillier has been translated in the 'Provincial Journal.' The authors distinguish the dropsical effusions of pregnancy with

1st. Œdema, either simple or complicated, with affection of the central organs of respiration and circulation; and,

2d. Œdema, associated with albuminuria. After noticing the changes induced by the pregnant state upon the composition of the blood, and more especially the tendency to diminution of albumen, they proceed to the history of simple anasarca. By this term they allude to the serous infiltration of the lower extremities so often seen in pregnant women, and which are caused by the pressure of the gravid uterus on the iliac veins. These are harmless, and disappear on delivery.

When associated with disease of the heart or lungs, anasarca is not to be regarded so much in reference to the condition of pregnancy as to the organic disease. The prognosis is more unfavorable, and the treatment is to be conducted as in the unimpregnated state.

The second form of dropsy, or that accompanied by albuminuria, is considered by the authors under two aspects, as it is or is not complicated with convulsions.

The distinctive character of this form of dropsy is the appearance of albumen in the urine. Respecting the symptoms, progress, and treatment, the authors have nothing new to communicate.‡

23. *Labour and its Complications—Induction of Premature Delivery.*—Dr. Hoffman has undertaken a laborious statistical investigation of all the cases of

* Boston Med. and Surg. Journal, May 1848. † Journal de Méd. de Lyon, 1841.
‡ Archives Générales, and Prov. Journal, Aug. 9, 1848.

artificial induction of labour within his reach, of which he has, in the whole, collected 524 examples.

The *age* of the mother is recorded in but 146 cases, the youngest being 17, and the oldest 44; in more than one half of the entire number she had reached or passed her 30th year. Of 258 cases, in only 49 was the operation resorted to in a *first pregnancy*. Although the *repetition* of the operation in the same woman must have been no infrequent occurrence, the author finds records of this only in 34 cases, in some of which it was performed three, four, or more times. The *stature* of the women is recorded to have been oftener small than large, as would be expected, from the greater frequency of small and rickety pelves in conjunction with the former. In comparatively few cases has the author found the *indications* for the operation furnished, but justly concludes that, in the bulk of cases, it has been instituted on account of narrow pelvis. In only 68 cases does he find that *preparatory treatment*—such as baths, tepid injections of the vagina, friction of the abdomen, &c.—has been put into force; an omission, he considers, much to be regretted.

In nearly two thirds of the cases, the *mode of operation* is given. Of the more generally admitted of these, the use of *secale cornutum* is recorded in 45 cases, almost entirely by English practitioners. In these, 23 children were born alive, 15 dead; and, of the whole 38 noted, 12 others died within 36 hours after birth. The *Hamiltonian* plan of detaching the membranes, modified by several Germans, is exceedingly tedious. The introduction of *prepared sponge* is a favorite mode with the Germans, and was employed in 70 cases. In 56 cases in which the condition of the child was noted, 42 were born living. *Puncturing the membranes* is the oldest mode, and has been resorted to in 180 cases, and, indeed, doubtless in many of the others not specified. It is beyond all others the easiest, quickest, and most certain means of inducing premature labour, but has been received with much more favour in England than in Germany. By it, however, a far less proportion of children are saved than by the use of the sponge. The fates of 178 are specified, of which 103 were born alive, 12 still-born, and 63 born dead.

As to the *presentation of the child*, it is specified in only 120 cases; and of these 45 were cephalic, 75 non-cephalic presentations. This proportion is, however, delusive; as it is nearly certain that all the cases not specified were natural presentations. Even allowing this, we still find every seventh case a preternatural one. In the 75 cases, the great number of 19 cross-births are noted. In 84 cases the completion of the labour required assistance; in 36 by the forceps, 18 by turning, and 11 by perforation.

The fate of the *child* is recorded in 373 cases, in which 250 were born living, or recovered from asphyxia, and 123 dead. But in 77 of these cases, the child died from circumstances which could have had no reference to the operation, as faulty position, perforation, &c. Of 192 of the children born living, further reports state that 127 continued to live, and 65 had died—28 in the course of six hours, six in 24 hours, and the rest at periods varying from a day to a year or more.*

24. *Difficult Labour—from Vaginal Cicatrices.*—Dr. Purefoy gives the case of a female, æt. 40, who had previously been delivered by craniotomy, after a severe and lingering labour, after which the vagina sloughed, and gave rise to a vesico-vaginal fistula. At her second confinement the vagina was found to be traversed by a rigid circular cicatrix, which entirely prevented the finger reaching the uterus, and through which the cord had prolapsed with the arm

* Neue Zeitschrift für Geburtskunde, vol. xxiii, and Brit. and For. Med.-Chir. Rev. Oct. 1848.

presenting. Subsequently, this stricture was found to be connected with the os uteri by intimate adhesion. Repeated attempts with the finger succeeded in dilating it, and at last the hand was passed into the uterus, the child turned and delivered, after a labour of about two days' duration. It was only seven and a half months old. Violent inflammation of the uterus with fever set in, and the patient sank at the expiration of a month, worn out by repeated rigors, hectic fever, sloughing and suppuration of the vagina, with obstinate diarrhœa, and attacks of bilious vomiting.

In the other case, the woman was in labour with her third child. Of her second child she was delivered with great difficulty, by the aid of instruments. In the seventh month of this, her third pregnancy, she underwent much fatigue, and labour pains supervened. On being examined, the fœtal heart was found pulsating, and the breech presenting at the os uteri. The pains caused her excessive suffering. After labour had continued nearly two days, a dead child was born. She made a good recovery.*

—*From complete Occlusion and Rigidity of the Os Uteri and Vagina.*—Dr. Trask has published a paper (see art. 74), which the reader will find to be a very valuable addition to the literature of the accident. It will be seen that the author regards inflammatory action as the most frequent cause of occlusion, and advises that interference should not be long delayed, for fear of rupture of the uterus.

—Dr. Paul Bedford, U.S., narrates a case illustrative of the foregoing accident, and its treatment. The female had been labouring six and thirty hours before she was seen by Dr. Bedford, and no os uteri could then be discovered either by himself or Drs. Mott and Clinton, who had been previously in attendance; in fact, it was completely obliterated. Dr. Bedford, therefore, with the consent of his colleagues, made a bilateral section of the cervix, through which the head was immediately felt. The labour was not materially hastened by this proceeding, and as symptoms of exhaustion declared themselves, the forceps were applied, and the child extracted. Both it and the mother did well.†

25. *Prolapse of the Gravid Uterus during Labour.*—An additional instance of this complication is narrated by Dr. Watson, U. S. He was called to a female, æt. 22, in labour with her first child. She was lying on the floor, and the attending midwives were in the greatest consternation. On examination, he found the uterus entirely out of the vulva, and containing a fœtus of full term: it was dry and ecchymosed, with the os uteri partially dilated, but thick and unyielding. Dr. Watson enveloped the uterus in warm clothes, and, as uterine action ensued which threatened rupture, he incised the cervix to the extent of three quarters of an inch in three directions. After delivery the uterus was replaced, and kept *in situ* by a sponge pessary.‡

—Analogous cases to the above will be found in our preceding Volumes. (Vol. III, p. 262, and Vol. V, p. 288.)

26. *Spontaneous Evolution.*—In a critical inquiry into the mechanism of the spontaneous evolution of the fœtus, Dr. Clay has endeavoured to reconcile the discrepancies in the opinions expressed by different writers. He shows that in the cases considered as instances of spontaneous evolution there have been two orders of fœtal position. In the one, in which one presenting part has retired, and another advanced, he maintains that the evolution has not taken place in the pelvic canal, but in the uterus itself. The other is when the evolution takes place in the pelvic canal, in which the part first presenting

* Dublin Quarterly Journal, May 1848. † Amer. Journ. of Med. Sciences, April 1848.
‡ Philadelphia Med. Examiner, April 1848.

never retracts, but allows the uterine action to push the other parts of the fœtus past it, and thereby accomplish delivery. The first of these are the cases commonly recorded as instances of evolution. In his farther description of the process, Dr. Clay accords with the opinion of Dr. Douglas, which he quotes at length, and concludes by expressing his opinion that no such circumstance as evolution ever takes place; in the first class of cases it is merely a change of presentation, and in the second the child is born doubled up.*

—In a short communication by Dr. Radford, in the same number of the 'Obstetric Record,' views, identical with those of Dr. Clay are propounded, and the author proposes, as a substitute for the improper expression "evolution," that of *torsion*, *doubling*, and *expulsion*. Two cases are related, in both of which it was distinctly ascertained that the presenting arm did not return, but that the shoulder was, during the whole process of expulsion firmly wedged under the pubis.†

—A case of the first form of "evolution," where both hands presented, and were subsequently replaced by the foot, is recorded by Mr. Davies.‡

27. *Turning in Narrow Pelvis.*—We continue the analysis of Dr. Simpson's Essay. (See Vol. VII, p. 333.) Having shown that the danger to be anticipated from compressions of the child's head in dragging it through a distorted pelvis is exaggerated, the author next shows, by statistical evidence, that the practice is not incompatible with the safety of the child, in consequence of compression of the cord, and concludes, therefore, that, as respects *its* life, the new practice has infinitely the preference over craniotomy. But an important question still remains; how is the mother's safety affected in the two operations respectively? To this question he devotes a separate section.

He commences by exhibiting the mortality of the operation of craniotomy to the mother, from tables drawn up from Dr. Churchill's collection of data, and contrasting them with the mortality from turning. This he shows to be for craniotomy 1 in 5, for turning 1 in 15. So far, he observes, figures give a result in favour of turning in general, but the question requires to be further extended to the comparison of turning in narrow pelvis, in which forcible extraction and compression by the head is necessitated. That such compression of the maternal tissues is not a source of so much danger as might be anticipated the author next endeavours to demonstrate, by a comparison of cases of craniotomy accompanied and not accompanied by force in the extraction. He, for this purpose, analyses 87 cases reported by Dr. Lee, in 30 of which, where unusual traction was necessary, the mortality was 2, or 1 in 15, while in 57, in which no particular difficulty was noticed, the mortality was 1 in $4\frac{1}{2}$, causing it to appear that, *cæteris paribus*, unusual traction and compression does not add to the maternal mortality; and therefore that such an event is not to be anticipated in turning under similar circumstances. The reason of this he considers to be that what is lost in *force* is gained in *time;* in other words, that more danger would accrue from the prolongation of the labour, than from the early and temporary pressure exercised in turning; the danger in parturition being, as he shows in Sect. 4, proportionate to the duration of the labour.

This latter law Dr. Simpson considers so important, that he recurs to it in the present part of his essay, by tabulating the forceps and craniotomy cases of Dr. Collins, under this particular point of view. He thus demonstrates that the maternal deaths from instrumental aid were 1 in 16 when the labour had not continued 24 hours, while in labours of 48 hours' duration it rises to

* Obstetric Journal, No. 13. by J. Radford, p. 8.

† Cases of Torsion, &c., in Shoulder Presentations;

‡ Obstetric Record, No. 7.

2 in 5. So also in turning, where the labour was under 24 hours, the mortality was one in 21, when above 24 hours, 1 in 3.

In summing up the prceding observations, Dr. Simpson draws the following deductions:

" 1st. A means of artificial delivery, such as turning, which, in cases of pelvic contraction, would allow us to finish labour at an early date, should, as a general rule, add greatly to the safety and chance of life of the mother, as compared with a means of delivery, such as the long forceps or craniotomy, which cannot be legitimately practised till a much later period after the commencement of parturition.

" 2d. The facts I have adduced show that the exertion of force in artificial delivery is attended with comparatively little danger, provided the delivery is early; and that it is less hazardous than the protraction of the labour.

" 3d. All these deductions are only corollaries to this higher and more comprehensive law, that the degree of danger and fatality attendant either upon natural or morbid parturition increases in a ratio with the increased duration of the labour.*

—The publication of the preceding essay, and more particularly its fourth section, in which the mortality of the mother is stated to increase in a ratio proportioned to the duration of labour, has called forth a letter from Dr. Collins, of Dublin, complaining that Dr. Simpson's calculations, founded upon his (Dr. Collins) tables, are erroneous, inasmuch as he omits to state the cause of death in the cases of labour prolonged over twenty hours, and which Dr. Collins declares to have been in many instances unconnected with delivery. The writer then procceds to state his belief that the proposal to turn in deformed pelvis is a dangerous doctrine, especially now that under the usc of chloroform, a degree of force is likely to be employed without the expression of pain, which may be productive of the worst consequences, and finally reiterates his complaints of statistical inaccuracies on the part of Dr. Simpson.†

—In reply to this letter, Dr. Simpson retorts the charge of inaccuracy upon Dr. Collins, and endeavours to show the correctness of his former statements by a more detailed account of the statistics upon which they are based. Thus he shows, in reference to the maternal mortality of protracted labours, that of Dr. Collins's 15,850 labours, 3537 terminated in 1 hour, with a mortality of 1 in 322, while 130 were prolonged over 36 hours, with a mortality of 1 in 6; and so on in regular progression between the two extremes. In a sccond table he shows, contrary to the asscrtion of Dr. Collins, that the morbid complications of delivery are increased also in ratio with thc duration of labour; as, for instance, in refercnce to puerperal fever, that it occurred once in 219 cases, where delivery took place within 6 hours, and once in 59 cascs, wherc it was prolonged over 12 hours. The same evidence is also given regarding infantile mortality.‡

[It would thus appear that the same figures, whcn handlcd by Dr. Simpson and Dr. Collins rcspectively, givc rise to opposite results. Which is right and which is wrong we will not venture to dccide; for to do so with any show of justicc would necessitatc an analysis on our own part of thc litigated statistics, a labour which the calls upon our time entirely preclude.]

—In confirmation of thc feasibility of turning in narrow pelvis, we may statc that Dr. Wilson, of Glasgow, affirms that he has followcd the practicc for the last thirty years, and thinks that he has saved many lives by it. He, however, puts certain limitations upon its performance; for instance, when labour has been protracted, and the patient's strength exhaustcd, he would

* Provincial Journal, Oct. 4, 1848. † Ibid. Oct. 18, 1848. ‡ Ibid. Nov. 1.

not think it justifiable; nor when there are reasons to believe that the child is dead. His motives for preferring to turn, under the circumstances which he deems justifiable, are, that in that operation the more yielding squamous portions of the temporal bones first come into contact with the narrowed brim of the pelvis, instead of the comparatively inelastic parietal bones.*

—We neglected to mention in our former Report that Dr. Radford had published a short communication on "Turning in Contracted Pelvis;" we therefore take the present opportunity of supplying the omission. Dr. Radford informs us that Velpeau is the first writer who practised turning under these circumstances. Before having recourse to the operation, he states the necessity of being able to estimate the degree of distortion relatively to the size of the fœtal head, otherwise it may happen that after all the perforation will be required, which, after turning and extracting the body, will, he believes, be attended with increased difficulty and danger. He further expresses his opinion that it would be culpable to attempt turning with the passages undilated, or when the liquor amnii has been some time discharged. As regards the chances of the child's life, he thinks that when the contraction is slight, the long forceps is, in the majority of cases, to be preferred. Further, in reference to the comparative facility with which the head will pass, he differs from Dr. Wilson in considering that the base coming first, as in footling cases, does not facilitate the delivery, unless such unwarrantable force be used as will risk the separation of the body from the head. On the whole, we gather from Dr. Radford's paper, that however anxious he is to do away with craniotomy, he is not an advocate for turning to the extent advised by Dr. Simpson.†

28.—*Uterine Hemorrhage.*—A very elaborate and complete essay on uterine hemorrhage has been written by Mr. Newnham, of Farnham, which we shall attempt briefly to analyse.

Uterine hemorrhage, he informs us, may be active or passive, the distinction being made to rest upon the quantity of blood lost in a given time. It may also be external and visible, or internal and concealed. The latter would be aggravated in a case of twins, because a larger space is occupied by the placental attachments. In highly nervous females, it may arise from mental emotion; hence the necessity of the expression of hope and confidence on the part of the accoucheur. Menorrhagia, hemorrhage from ulceration of the os, from polypus, and malignant disease, &c,, are mentioned as instances of the occurrence of hemorrhage in the unimpregnated uterus.

Abortion, as a cause of hemorrhage, is next considered, and its causes are separately brought under review. These are shown to be chiefly plethora, anæmia, nervous surexcitation, original feebleness, death of the fœtus, accidental separation of the ovum, fever, syphilis, organic disease of the uterus, mental emotion, &c.

In treating of hemorrhage after delivery, the author first mentions inertia of the uterus as a cause, and gives certain judicious rules in reference to the management of the delivery of the child and placenta, and the means of obtaining contraction of the uterus. He next enunciates the circumstances which may give rise to internal hemorrhage, and alludes to the use of the plug, and the circumstances under which it is and is not available. He subsequently proceeds to discuss the treatment of placenta prævia, more particularly in reference to the disputed question of the propriety of extracting the placenta. To this practice he adduces several objections. In the management of these cases, the author adopts the practice usually recommended, viz. where the neck is undeveloped, as before or at the seventh month, to

* Edinburgh Monthly Journal, May. † Prov. Med. and Surg. Journal, July 1847.

wait, unless life be threatened, and then to evacuate the liquor amnii, and bring on labour. If the cervix is developed, and the os dilated or dilatable, to turn and deliver; if the latter state does not exist, to wait, give antimony, &c., till sufficient relaxation ensues. He thinks it immaterial whether the child is reached by the side of, or by going right through, the placenta.

As the general treatment of uterine hemorrhage, which is the next subject reviewed, the author speaks seriatim of the several remedies generally employed. He objects to the indiscriminate application of cold, and believes that ergot has received a degree of credit to which it is not entitled. The plug is only available or justifiable in the early months. Sedatives, the mineral acids, opium, and galvanism, are all in their turn discussed, and the essay concludes with short instructions for the management of convalescence.*

—In hemorrhage from placenta prævia, Dr. Bellini advises incisions of the cervix in the latter months, to expedite delivery. He cites four cases, in which this practice was adopted with success, on account of rigidity of the os uteri.†

29. *Removal of the Placenta before the Child.*—Dr. Waller narrates six cases in which the placenta was extracted before the child, and others are recorded by Dr. Ray, Mr. Stokes, and Mr. Meadows. In all these, the hemorrhage ceased immediately.‡

30. *Prevention of Hemorrhage from Inertia.*—Dr. Christie advises the bandage before delivery, and the exhibition of ergot just before the head is expelled.§

31. *Rupture of the Uterus.*—We beg to direct the attention of the reader to a memoir on this accident by Dr. Trask, an abstract of which will be found at a previous page (art. 74). It is an exceedingly elaborate production, and offers a more complete history of the subject than any previously published.

—The memoir of Dr. Krantz has been retranslated by Dr. Clay, and may be found in his 'Obstetric Record.'‖

—Dr. Tyler Smith has treated of rupture of the uterus in his lectures before alluded to. He believes that the accident is generally due to exaggerated uterine action alone, and that in all cases it takes a prominent share in its production. His views of the causes and prevention of the accident, based upon the excito-motory theory, are well worthy of consideration.¶

—Two cases of rupture of the uterus are reported by Dr. Mitchell. In the first, one leg only had escaped into the abdomen; the child was extracted, and the woman recovered, under the use of large doses of opium.

In the second case, the escape of the child was complete; gastrotomy was performed after the mother's death, but it is not stated whether the child was saved, though it may be inferred that it was not.**

—A case of recovery after ruptured uterus is also recorded by Dr. Coley. In this instance the fœtus, with the exception of the head, had escaped into the peritoneal cavity. The narrator states that he introduced his hand through the rent, and, seizing the feet, dragged the body back into the uterus, and so delivered the child.††

—Dr. Simpson also describes two cases of rupture depending upon hydrocephalic fœtuses, and alludes to the frequent connexion between the two conditions. In confirmation of this, he states that out of seventy-four cases of intra-uterine hydrocephalus collected by Dr. Keith, rupture of the uterus occurred in sixteen. He further insists upon the necessity of early comple-

* Obstetric Record, Nos. 5, 7, 9. † Reviewed in Brit. and For. Med.-Chir. Rev. Oct. 1848.
‡ Monthly Journal, June 1848. § Obstetric Record, No. 11. ‖ No. 8.
¶ Lancet, Nov. 4. ** Obstetric Record, No. 13. †† Ibid. No. 11.

tion of delivery, when the fœtus is ascertained to be hydrocephalic, and advises puncture of the cranium with a trochar rather than craniotomy.*

32. *Puerperal Affections.*—We cordially direct the reader to the perusal of the articles on the puerperal conditions and affections, in the last number of Dr. Copland's 'Dictionary of Medicine,' as offering a complete epitome of the present state of knowledge on these important subjects. There is not, in fact, a single condition incidental to the puerperal state which has not there met with a most ample and careful examination.

33. *Fainting after Delivery.*—All accoucheurs are familiar with fainting from hemorrhage after delivery, but there is another cause of that accident alluded to by Dr. Meigs, which obstetrical writers do not appear to have sufficiently insisted upon. This cause is to be found in the sudden removal of the support to the abdominal blood-vessels, by the emptying of the womb, and is analogous in its rationale to the fainting which often follows tapping in ascites or ovarian dropsy. This is to be prevented by the timely use of the bandage, and may be treated by pressure of the abdominal parietes, combined with the use of stimulants.†

—The same author alludes to the possibility of the occurrence of fainting from distension of the vagina by coagula, without refilling of the womb. He considers, however, that there is some other principle involved besides the actual loss of blood, but be this as it may, the patient will recover by simply turning out the clots, without any other resource. "To turn out the clots," the author remarks, "is to relieve the patient of her deliquium."‡

34. *Puerperal Fever.*—Dr. Copland divides "puerperal fevers" into mild and severe: the former class including ephemeral fever or weed, intestinal or gastric fever, and miliary fever; the second comprising puerperal peritonitis, inflammation of the uterine appendages, &c. It is of these latter only that we profess to give the author's views more in detail.

Classification of Puerperal Fevers.—Dr. Copland alludes to the various descriptions of fever by different writers, each based upon the experience of the individual writer, and therefore not sufficiently comprehensive. Thus Armstrong, Hey, Campbell, &c., who observed only the inflammatory form, were indignant at the idea that a low typhoid type, as described by Clarke and Hamilton, could have an existence. Again, others have viewed puerperal fever as more or less complicated in form and nature. John Clarke recognised three types:—1st. That consisting in local inflammation; 2d. Primary inflammatory or synochal fever developing local inflammation; 3d. Typhoid fever with inflammation. Dr. Lee refers the symptoms to four varieties:—1st. Inflammation of the peritoneum; 2d. Inflammation of the uterine appendages; 3d. Inflammation and softening of the muscular tissue of the uterus; 4th. Inflammation and suppuration of the uterine veins and absorbents. Gooch, Boivin, and Deyes have reduced the varieties to two: simple inflammatory and typhoid, &c.

A consideration of these and other classifications, tested by his own experience, has led Dr. Copland to propose the following:

1st. Inflammatory Puerperal Fever { Puerperal peritonitis, inflammation of the uterine appendages.

2d. Synochoid Puerperal Fever { with peritonitis, — metritis, &c. — phlebitis.

3d. Malignant Puerperal Fever.

* Monthly Journal, June 1848. † Females and their Diseases, p. 550. ‡ Ibid.

Of these, the second is that most frequently observed, both in public and private practice.

Besides these forms, Dr. Copland alludes to another, which is no more or less than true typhus occurring in the puerperal state, but, as he correctly observes, fever thus originating should no more be viewed as a form of puerperal fever, than smallpox or scarlatina occurring under the same circumstances.

With the above sketch of the systematic arrangement of puerperal fevers, the author proceeds to detail the symptoms, causes, diagnosis, &c. of each. On these points our space allows us only to remark, that the description is most minute and accurate. On the debatcable question of the contagious and erysipelatous nature of puerperal fever, Dr. Copland decides in the affirmative, and brings forward a mass of evidence in confirmation of his opinion, which renders any other conclusion next to impossible. He terminates this part of his subject with the following cautions, in the importance of which we heartily concur.

1st. That lying-in hospitals have been supported in mistaken views, and that the charity would be more safely bestowed to its objects, and to others contingently, if it were so administered as to afford the required aid, and increase the comforts of patients at their own houses.

2d. If these institutions be still supported, the physicians and surgeons ought not to attend the cases of puerperal fever or erysipelas which so often break out in them, for by so doing they convey the poison from one patient to another. In all such cases, the consulting physician or surgeon, who should not be engaged in midwifery practice, ought to take charge of these cases, which should be moved to a separate part of the establishment.

3d. A physician or surgeon engaged in midwifery practice, on the occurrence of puerperal fever in any of his cases, should either call in a physician not engaged in this practice, to whose care she should be committed, or he should relinquish the care of puerperal females during his attendance in cases of this fever, or even in cases of erysipelas.

4th. An obstetric practitioner should not make an autopsy of a case of puerperal fever, erysipelas, peritonitis, diffuse cellular inflammation, &c., nor even attend such case, without washing his hands and changing his clothes, and allowing three or four days to elapse between such attendance and midwifery engagements.

Dr. Copland forcibly and justly argues, that though formerly indulgence might fairly be extended to those practitioners who unwittingly conveyed this deadly pestilence from patient to patient, no excuse on the plea of ignorance should now be granted. To be the means of propagating the disease is no longer a *misfortune*, but it is a *crime*. In this remark we emphatically concur.

—On the subject of contagion, Dr. Meigs (op. cit.) maintains the opposite opinion. "If," he observes, "you should assert that a medical man may generate the fomites of the disease in his own constitution, without being at the same time subject to any manifest signs of the malady himself, you will arrive at a conclusion far more probable than that of the contagiousness of this generally serious malady." It must be stated nevertheless, that from the care he takes to inculcate caution as to ablution, &c., his convictions in the non-transmissibility of puerperal fever are not of the most positive kind.

35. *Treatment of Puerperal Fever.*—Dr. Copland considers the treatment of each of his varieties of puerperal fever seriatim.

In the *Inflammatory* form, the antiphlogistic treatment is to be carried out as in simple peritonitis, due allowance being made for the previous sanguineous losses or exhaustion of the patient. Dr. Copland, however, cautions the reader that there are mixed cases, partaking somewhat of the nature of

both the inflammatory and the synochoid forms, especially in large towns, and in these that it will be prudent to trust to calomel and opium, turpentine, &c., rather than to large bleedings.

In the *Synochoid* form, with local inflammation in whatever organ, the early reaction quickly passes into a state of asthenia, and in this, though small local bleedings are sometimes required, Dr. Copland abjures all active depletion. The remedy upon which he chiefly depends is *turpentine*. From a lengthened experience of its effects, and, from his own account, a much larger experience than has been met with by any other writer, he states that it is the most efficacious medicine which can be given. At the same time, especially where the local reaction is great, he advises the exhibition of calomel, camphor, and opium. This favorable opinion of turpentine, it must be remarked, is not entertained by Dr. Lee and many others; but Dr. Copland disposes of their objections, on the plea that they have not given it a fair trial. His mode of administering it, is to give half an ounce, with or without castor oil, three times, besides administering it by enema.

In the *malignant* form, turpentine is still, according to Copland, the remedy; but he conjoins colomel, opium, and camphor, with or without capsicum and quinine, according to the degree of vital depression. The reader is requested to turn to the article whence these remarks are taken, for an admirable *résumé* of the various modes of treatment recommended, and a careful comparative estimate of their effects.

—In the treatment of puerperal fever, Dr. Meigs is a disciple of Gordon, believing that profuse bloodletting is the sheet-anchor. He is not deterred by the reports of typhous forms of the disease from regarding it as an inflammation, and treating it accordingly. He follows the bleeding with calomel and opium.*

36. —Mr. Boddy has narrated his experience of puerperal fever, as it appeared in 1842, in the Westminster Lying-in Hospital. The number of cases observed was twenty-six, the analysis of which shows forcibly the effects of low temperature and mental prostration, in the production and mortality of the disease. Respecting treatment, he remarks that in the malignant form all methods of treatment appear equally inefficacious. The most rational plan to pursue he conceives to be to subdue local inflammation by local depletion, to allay pain by anodynes, and to give mercury. Removal of putrescent vaginal secretions he properly regards as of great importance; as also the support of the strength by nutritious diet, and stimuli when necessary.†

37. *Communication of the Disease by the Accoucheur.*—Mr. Beecroft reports seven cases, all of which proved fatal, and for the occurrence of which he is distinctly answerable. He was a non-contagionist until the fourth case opened his eyes, and he then thought it right to leave his practice for *nine* days. On his return, as might have been predicted after so short a seclusion from midwifery practice, he had three other fatal cases. This is an addition to the already too numerous instances of the direct conveyance of the disease by the attending accoucheur.‡

[We trust that the time is not distant when every practitioner will be imbued with the conviction of the contagious nature of puerperal fever, and of his own share in its propagation; and that no feeling of self-interest will intervene to prevent the performance of an obvious duty, that of declining practical midwifery for a time, immediately upon the occurrence of a case in his own sphere. With the amount of evidence before him, upon which this duty is

* Op. cit. † Obstetric Record, No. 19, 1848. ‡ Lancet, June 24, 1848.

inculcated, we do not envy the feeling, or the conscience, of the man who meets with three or four cases in succession.]

38. *Quinine a Prophylactic in Puerperal Fever.*—In an epidemic which occurred in the hospital of Rouen, in 1843, Dr. Leudet endeavoured to ascertain whether, by the exhibition of quinine, the body might be enabled to resist the invasion of puerperal fever. From September 21st, 1843, to January 8th, 1844, 83 women were delivered in the hospital. In 9 of these women, who took quinine, no instance of puerperal fever occurred; while in the remaining 74, who did not take it, 21 were attacked. In 1845, of 26 puerperal women, 15 were treated with quinine, of which only 1 was attacked with the fever; while of the 11 who did not take it, 8 had the disease. Again, in 1846, between the 19th of March and the 21st of April, 36 women were delivered. Quinine was administered to 17 of these, one of whom only was attacked; while of the remaining 19, the disease appeared in 11.

Dr. Leudet begins by giving five grains of quinine four hours after delivery, and repeats the dose every six hours till the third day, when the quantity is diminished. In certain instances he commences before delivery.*

39. *Puerperal Convulsions.*—We have received a pamphlet on the 'Epileptic Form of Puerperal Convulsions,' by Mr. Joseph Thompson, of Nottingham, which is worthy the attention of every accoucheur. There are, perhaps, few of the accidents to which the puerperal female is exposed which have been the subject of more difference of opinion, as to pathology, than convulsions; and it may be stated with truth, that, until the researches of Marshall Hall were brought to bear upon the disease, the nature of the attacks was wrapped in complete obscurity. The author's object, in the present essay, is to explain the phenomena of the affection on the basis of the excito-motory theory, and this he has done in an admirable manner. It cannot be said that he has advanced any idea which would appear novel to those who are familiar with Dr. Hall's important discoveries, and who are accustomed to view the diseases of the nervous system by the light which they have afforded; but to the mass of the profession, which we fear does not fully understand, or appreciate, the physiology and pathology of the true spinal system, Mr. Thompson's pamphlet will afford much valuable information, and will clearly unravel a subject which must, without such aid, be one of confusion and obscurity. The length of the essay prevents our following the author very closely. The first and second sections, which treat of the symptoms and causes of puerperal convulsions, we pass over, as they are but a recapitulation of the ordinary writings on the subject. In Section III, the author studies the symptoms under the two groups of *cerebral* and *spinal*, and enters into a careful account of the anatomy and physiology of the separate divisions of the cerebro-spinal and ganglionic systems, and their mutual connexions, as necessary to the comprehension of the distinction between the two orders of symptoms. In this description, which, for the most part, corresponds with those given by recent writers on physiology,† we shall not follow him, but proceed at once to his application of them to the pathology of the disease.

The author shows, by citing the expressed opinions of Drs. Collins, Hamilton Lee, and others, and by adducing the discordant and diverse accounts of post-mortem examinations, that no very just appreciation of the proximate cause of the disease has been hitherto entertained. He subsequently states his own opinion, that the appearances which by some have been regarded as the proximate cause of the convulsions, have been in reality their effects. He

* Union Médicale, April 8, 1846.

† Flourens, Valentin, Marshall Hall, Carpenter, Müller, &c., from whom quotations are freely taken.

insists upon the fact, that no injury to the cerebrum, or cerebellum, can cause convulsion as long as the true spinal system is not involved, which fact, he observes, is a sufficient answer to all those who regard congestion or other diseases of the brain as the disease. Having repeated this and other opinions, he states his own in the following manner:—There can be no question that the proximate cause of puerperal convulsion consists in a morbid irritation of the true spinal system, and more especially of the medulla oblongata, propagated to it, from the mucous surfaces, through the incident nerves of the excito-motor system.

In Section V, the subject of diagnosis is considered. The chief distinction to be drawn is between the "apoplectic," the "hysteric," and the "epileptic" convulsion. In hysteric convulsion, there is not the complete closure of the glottis, and consequently there is not the stertor and coma; neither, as Marshall Hall expresses it, in reference to general epilepsy, is there the perfect laryngismus and odaxismus, which two symptoms are pathognomonic of *epilepsy*. The apoplectic convulsion is distinguished by the rapid supervention of coma, stertor, &c., the non-repetition of the spasmodic movements.

The treatment recommended by the author does not differ from that in general use. He, however, gives a physiological reason for the treatment employed, which, in the hands of those unacquainted with the influence of the excito-motory system of nerves, is entirely empirical, and, though successful, is conducted at least on false principles.*

§ III.—*Diseases of Children.*

40. *Value of Fœtal and Embryonic Life.*—Under this title Dr. Radford has contributed an essay, in which he inquires into the legal, social, and obstetrical value set upon the product of conception. In the first portion of the inquiry, viz. whether the law forms a just estimate of this value, he mentions, with indignation, the ridiculous and ignorant farce occasionally performed, in the impanelment of matrons to decide upon the pregnancy of criminals, and criticises the opinion which would make a distinction between an embryo and a *quick* child, insisting upon the justice of throwing as much protection around the former as the latter.

In the second part he shows that society, from its origin, has placed little or no value on embryonic life, and that, even in the present day, enlightened mothers think nothing of their abortions further than as their own life and health may be affected. In the third part he inquires whether the obstetrical principles of the profession afford the best means of preserving the embryo and fœtus. This inquiry embraces the symptoms and treatment of spontaneous abortion, the propriety or non-propriety of inducing abortion in narrow pelves, &c. This practice has been recognised by many; but Dr. Radford thinks it unjustifiable on religious grounds. Premature labour is next considered, and the propriety of inducing it admitted, both in reference to the child and to the mother. Rules for the use of ergot, the forceps, perforation, &c. are also given.†

41. *Monsters.*—Several instances of monstrous births have recently been recorded. Dr. Lyell met with a double monster, the fœtuses being united from the umbilicus to the sternum, having one pericardium containing two distinct and perfect hearts; two pairs of lungs; a single diaphragm and liver. The umbilical veins and arteries were double at their origin, and inserted into separate placentas, but united midway into a single cord.‡

* Essay on the Epileptic Form of Puerperal Convulsions. Nottingham. p. 74.
† Obstetric Record. ‡ Monthly Journal, August.

— M. Prus records the birth of a monster with two heads, one white, the other black; the body was normal. The black colour was clearly ascertained not to depend upon nævus or other morbid condition, but was due to the existence of pigmentum nigrum, as in the negro. The parents were *fellahs*. He could not discover that the mother had had connexion with a negro.*

— A very unique case has been published by Mr. Gabb, being an instance of a fœtus possessing a brain but no spinal marrow. Dr. Tyler Smith, who mentions the case, regards it as a proof of the correctness of his explanation of the so-called fœtal movements. These were remarkably strong in the present case, but, as Dr. Smith observes, could not have depended on the motion of the fœtus, as there was no connexion between the muscles and nervous centres.†

[This case is certainly a most remarkable one, and offers no slight embarrassment to the accepted laws of developmental physiology.]

42. *Hemorrhage from the Umbilical Cord.*—Mr. Hill was called to an infant, eight days old, from whose navel there had been bleeding for five hours. Several applications had been employed without effect. The child appeared considerably sunk by the discharge; the cord was thick, and vessels apparently large. He first put a small compress on the part, which was retained by the pressure of the finger. He then mixed up two tablespoonfuls of plaster of Paris in a cup with water into a thick paste, and hastily removing the compress, he let the contents of the cup flow out on the part, where it immediately settled and hardened. He remained with the child some hours, and kept the abdomen partially exposed to the air; a few cracks having taken place on the plaster, he filled them up with fresh. He then put a bandage on the infant, removing it occasionally, and filling up the cracks that took place for the purpose of keeping the plaster solid, which was repeated for four days. It was then removed, and the bleeding did not return. On examining the cast, there appeared three small papillæ, which the author supposes corresponded to the two arteries and vein, which they occupied until the vessels became impervious.

Mr. Hill claims no merit of originality for this practice; he took the hint from Dr. Churchill, who, in a very excellent paper on the umbilical cord, published in the 50th volume of the 'Edinburgh Medical and Surgical Journal,' page 302, for the year 1838, has suggested such treatment.‡

43. *Pleuritis and Empyema in Children.*—In an essay which appears in the 'Dublin Quarterly Journal,'§ Dr, Battersby objects to the opinion of the infrequency of the above diseases in early life, and narrates six cases, four of which were instances of pleuritis with empyema, and the other two of simple pleurisy. The first case, which occurred in an infant two years and a half old, is remarkable for the tender age of the patient, but more particularly from the occurrence of spontaneous perforation of the thoracic wall. The fourth case, also, was that of a patient only two years of age. The author discusses the comparative facility in diagnosing pleurisy in the child and adult, and concludes that it is not so difficult in the former as has been supposed. The signs most to be depended on, he states to be bronchial respiration, feebleness of the respiratory murmur, and dullness on percussion.

44. *Infantile Dysentery*—Mr. Garlike relates some instructive cases, in one of which great advantage was derived from enemata of nitrate of silver. He does not seem aware that the same treatment had been previously recommended by M. Trousseau.

* Union Médicale.

† Lancet, Oct. 7, 1848.

‡ Dublin Medical Press, June 7, 1848.

§ No. 8.

BOOKS RECEIVED.

1. Treatise on the Practice of Medicine. By Dr. Wood. 2 vols. 8vo.
2. Graves's Clinical Medicine. Second Edition. 2 vols. 8vo.
3. Handbook of Physiology. By Dr. Kirkes. pp. 705.
4. Introduction to Practical Chemistry. By John E. Bowman. 12mo. pp. 278.
5. Coleridge's Theory of Life. Edited by Seth Watson, M.D.
6. On the Influenza of 1847-8. By Dr. Bevill Peacock. 8vo. pp. 182.
7. On the Treatment of Ulcers. By Henry Chapman, F.R.S. 8vo. pp. 156.
8. The Periodoscope. By Dr. Tyler Smith.
9. Clinical Midwifery. By Dr. Lee. Second Edition.
10. American Journal of Dental Science. Oct. 1847, Jan., April, July 1848.
11. Physiology. In Blank Verse. By Dr. Dick.
12. Chemistry as Exemplifying the Wisdom of God. By George Fownes. Second Edition.
13. Treatise on Diseases of the Heart and Great Vessels. By S. Hope, M.D., F.R.S. Fourth Edition. pp. 611.
14. Observations on the Bulam, or Yellow Fever. By Sir W. Pym, K.C.H., &c. pp. 310.
15. Reflections on Organization. By Henry Freke, M.B., T.C.D., &c. pp. 80.
16. Clinical Lectures. By J. Duncan, M.D.
17. Portraits of Diseases of the Skin. Fasciculus IV.
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2. Operation for Fissure of the Hard and Soft Palate. By Dr. John Mason Warren. (Reprint.)
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5. Report on Anæsthetic Midwifery. By the same.
6. Report on Medical Cases in the Liverpool Northern Hospital. By Dr. Turnbull.
7. Oratio ex Harveii Institut., &c. A Francisco Hawkins, M.D.
8. Observations on the Cultivation of Organic Science (being the Hunterian Oration for 1848). By R. Grainger, F.R.S.
9. Account of a Case of Hysteria. By R. West, Esq. (Reprint.)
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15. Remarks on Chloroform in alleviating Human Suffering. By W. H. Bainbrigge, Esq.
16. Arguments against the Indiscriminate Use of Chloroform in Midwifery. By Dr. William Merriman.
17. Scriptural Authority for the Mitigation of the Pains of Labour. By Dr. Protheroe Smith.

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1. Advantages of Ether and Chloroform in Operative Surgery. By T. B. Curling, F.R.C.S,E., Lecturer on Surgery, &c., London Hospital. 1s. 4d.

2. The Philosophy of Animated Nature; or, the Laws and Action of the Nervous System. By G. Calvert Holland, M.D., Physician Extraordinary to the Sheffield Infirmary. 12s.

3. On the Aims and Philosophic Method of Pathological Research, an Inaugural Address delivered at St. Thomas's Hospital, Dec. 15, 1847, by John Simon, F.R.S., formerly of King's College, London. 3s. 6d.

4. Practical Observations on Midwifery, and the Diseases incident to the Puerperal State; embodying a Clinical Report of the Dublin Lying-in Hospital for three years. By Alfred H. M'Clintock, M.D., F.R.C.S.I., and Samuel L. Hardy, M.D., F.R.C.S.I. 10s. 6d.

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17. Oratio ex Harveii Instituto in ædibus Collegii Regalis Medicorum habita die Junii xxiv, MDCCCXLVIII. A Francisco Hawkins, M.D., Coll. Reg. Med. Lond. Socio et Registario Olim Coll. Di. Jo. Bapt. Oxon. Socio. 2s. 6d.

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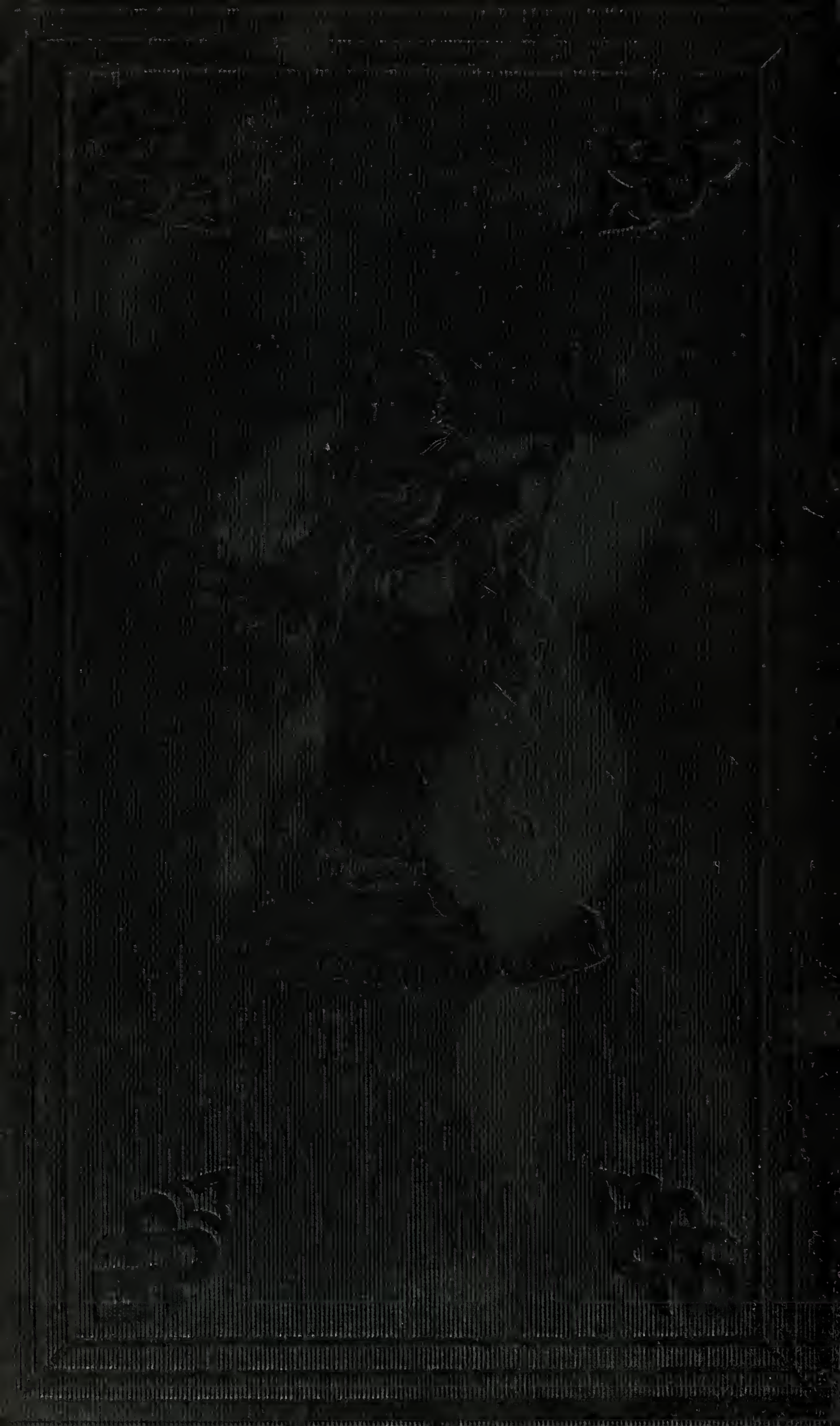
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